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EDITED BY

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THE
CINCINNATI MEDICAL NEWS.

VOL. XII. No. 136. Old Series. APRIL, 1879. VOL. VIII. No. 4. New Series.

ORIGINAL CONTRIBUTIONS.

The Germ Theory of Disease, and its Present Bearing upon Public and Personal Hygiene.

BY JOSEPH G. RICHARDSON, M. D.

[Read before the *Philadelphia Social Science Association*, and contributed to the MEDICAL NEWS.]

THE devastating epidemic of yellow fever, now raging in some of our Southern States, has called forth so much discussion in regard to the nature of this and kindred maladies, that few persons of culture have failed to hear, more or less, in the last six months, of the Germ Theory of Disease.

This hypothesis, of which, for more than ten years, I have been an earnest advocate, notwithstanding its unpopularity, both within and outside of the medical profession, has, in consequence of some recent discoveries, begun to be received into favor by many physicians, although many more still look upon it with distrust, if not with contempt.

Hence, without endeavoring to convert you all to a faith in the absolute truth of its tenets, I believe the time has now come for me to point out exactly what its doctrines are, to enumerate the chief facts which form their support, and to indicate the precautions which, if we admit it is probably true, wisdom enjoins upon us toward preventing the propagation and spread of disease.

In order to render myself clearly understood, I will begin by explaining, in the first place, that the Germ Theory of Disease, which was propounded by the celebrated Linnæus more than a century ago, but has since been somewhat modified by its successive advocates, professes to account for the phenomena of small-pox, typhoid fever, yellow fever, relapsing fever, measles, scarlatina, diphtheria, chicken-pox, erysipelas, etc., by attributing them to the more or less mechanical irritation and other disturbances set up by masses of spores and mycelial threads developing in the blood and in the affected tissues. The period of incubation (by which is meant the time between exposure to small-pox, for example, and the development of the complaint), is supposed to correspond with that required for the germination of these spores. The gradual increment of the symptoms is attributed to the progressive growth of the millions of minute fungoid plants whose period of greatest luxuriance marks the acme of the attack, and the death and destruction of which correspond to the decline of the disease. The contagiousness of the communicable maladies is accounted for, as you see, very beautifully by the existence of the immense number of spores (the true seeds of disease) constantly produced, evolved from the affected individual, and carried through the air of a room or house, either alone or attached to some of the innumerable epithelial cells, which are constantly being rubbed off by millions from the surface of our bodies. The general absence of second attacks is admirably explained by the hypothesis that the parasitic fungus, on the first occasion, has exhausted all, or nearly all, of some peculiar (unknown) organic ingredient in our bodies, which is absolutely requisite for its support, according to the very same law that will cause, as every farmer knows, his wheat to fail if he plants it repeatedly in the same ground and neglects to secure a due rotation of crops.

At the outset of my plea in favor of this doctrine, let me say that, in spite of the bold assertion of certain enthusiasts and *savans*, with whom zeal outruns knowledge, no really skillful microscopist will at present maintain that minute vegetable organisms, found in connection with contagious maladies, are as yet proved to have any definite relation to them as causes of disease.

Nevertheless, the presumption that such causal relation does exist, is, in my opinion, so strong that I intend to ask you to accept my judgment that it will be demonstrated in the near future, and I therefore seek, in this address, to popularize the conception that contagious diseases are conveyed from one person to another by the transplanting of microscopically visible spores, or seeds, which have a separate vitality of their own, each after its kind, and which are to be escaped, just as we would escape hordes of animal, or swarms of insect pests, by shutting them out or killing them before they can succeed in fastening upon our bodies.

I urge upon you, gentlemen, and upon the community at large, such a practical recognition of this theory now, because I believe that before many years it will be, with perhaps slight modifications, fully and amply demonstrated from miscroscopical and clinical research, and all true philanthropists must, it seems to me, desire that humanity should benefit by this knowledge, even at the present hour, although the conservative opponents of the Germ Theory, whilst evidently wavering in their defense, are not yet driven into the last ditch on this side of complete surrender.

I believe, as I wrote some years since, in regard to Favus, a parasitic skin disease of children (*Hand-book of Medical Microcopy*, Philadelphia, 1871, p. 252), "We see to-day the same old battle fought (now in regard to small-pox, diphtheria and their congeners), which, fifty years ago, was so strenuously contested by Biett and Morgagni, on the one hand, and the microscopists on the other, in relation to scabies, or the itch, at present universally admitted to be due to a minute insect, the *Acarust Scabiei;* and to the student of human nature it is a most interesting confirmation of the wise king's dictum, "There is no new thing under the sun," to observe how the same doubts, followed by the same objections, were urged against the parasitic character of the itch that are now put forward in oposition to the vegetable nature of the cause of ring-worm or favus. Thus, Biett, Cazenave, Lugol, etc., denied then, that, even with the aid of microscopes of high power, any insect whatever could be discovered. When, by a succession of lucky accidents, so many observers blundered into seeing the insect, that this position was no longer tenable, opponents to the parasitic theory changed their base of operations, and admitting the occasional existence of the *acarus*, stoutly maintained that, instead of being the cause of scabies, it was a secretory product of that affection, and by no means a constant one. Finally, when *proof* that the whole disease could arise from the deposit of a single itch insect upon the skin of a previotsly healthy person, became incontestable, the anti-microscopists took refuge in the assertion that in such cases "the insect, taken from the scabious, *being charged with the virus, the fluid of the vesicle*, by penetration of the cuticle inserted this virus and produced the disease," as the inoculation of cow-pox is accomplished.

One of the strongest arguments against the doctrine that living germs can enter human organisms from the alimentary canal, is that derived from the *a priori* probability that the solvent action of the gastric and intestinal juices must destroy all vitality in the microscopic organisms which on this hypothesis constituted the morbific matter, the *contagium vivum* of disease. A fundamental step toward establishing the Germ Theory, therefore, was manifestly that of proving that Bacteria, or analagous low forms of life, could penetrate from the stomach to the blood, to be thereby carried into all parts of the system, and this, I was, I believe, the first to demonstrate. My observations were detailed in the *American Journal of the Medical Sciences* for July, 1868, from which I extract the following as the most important:

Experiment 4th. At 7:45 P. M., May 17th, 1868, I drank four fluid ounces of water, similar to that employed in the preceding investigations and containing multitudes of Bacteria, estimated as numbering 27,000,000,000. At a quarter past eight, I examined a drop of blood drawn with the aid of a cataract needle from the tip of my finger and confined between a slide and cover cleaned with strong hydrochloric acid. Under the field of the one-twenty-fifth inch objective, the interspaces between the rows of blood corpuscles were found to contain multitudes of apparently spherical molecules, in rapid and erratic motion, but so very minute as to readily escape notice even with this high power, except under the closest scrutiny; in the course of half an hour, not less than one hundred were observed. At 9 P. M., another drop of blood, examined with the same precautions, exhibited, in addition to these minute particles, other bodies less active in their movements, of much greater magnitude, and which, under an amplication of 1,100 diameters, appeared precisely similar to the Bacteria I had been studying a few hours before in the identical decomposing beef juice imbibed. Five of them were thus enlarged so as to exhibit an unmistakable organized structure, totally different from their associated aggregations of Beal's germinal matter. Three of these Bacteria were each about one-twelve-thousandth of an inch in length and one-twenty-five-thousandth of an inch in width, very distinctly constricted in the middle; a fourth was obviously composed of four, and a fifth of six joints, arranged in a straight line, the motion of which was of that peculiar waving character so universal among the Oscillatoriacæ. The last two were most clearly visible when they happened to lie vertically to the surface of the glass, and would probably escape observation under the one-eighth inch, except in that position, or be therefore mistaken for simple globular bodies, although in several cases I detected in the second and third experiments (with a lower power) a shadowy elongation of one diameter of the revolving molecules thus observed.

These results of mine were corroborated soon after by the researches of Dr. Neftel, of New York, upon some of the inferior animals, in regard to which, he informs us (N. Y. *Medical Record*, July 15th, 1868, p. 226), "My experiment so far lead me to the conclusion that the lower vegetable organisms can continue to live and multiply in the tissues of living animals, and that they can enter into the general circulation, either through the intestinal canal or respiratory organs, or by means of hypodermic injections. What is their ultimate fate in the animal organism, and what their importance in producing disease further investigation will have to show."

M. E. Semmer, in *Virchow's Archives*, April, 1870, in his paper on the "Results of Injection of Fungous Spores and Fungous Cells into the Blood of Animals," gives additional corroboration of the conclusion to which I arrived by personal experiments.

Notwithstanding these and other investigations, the Germ Theory of Disease made but little real progress, at least in English speaking countries, until about three years since, when the researches of Professor Burdon Sanderson and E. Klein, of London, as set forth in Mr. Simon's Report for 1874, as Medical Officer of the British Privy Council, commanded much professional attention and doubtless led many who had previously ignored the theory to examine anew its claims to credibility.

In this report are indorsed the next two great steps toward the establishment of the Germ Theory, namely, the experiments of Oertel and Nassiloff, who showed that if the cornea of a rabbit is lightly pricked with a needle that has been thrust through diphtheritic false membrane, the wound does not heal up as similar tiny punctures with clean needles do, but becomes in a few days the center of radiating streaks of brownish opacity, which under the microscope are seen to be made up of colonies of the vegetable spores (micrococci) of dipththeritic disease. The other important step was the detection by Obermeier, of Berlin, of a minute fungoid growth (spirillum) in the blood of patients suffering with Relapsing Fever, a fact which Professor Stricker, of Vienna, whose world-wide fame as a most skillful microscopist renders his testimony conclusive, told me only a few weeks ago he had fully confirmed.

These and other researches, led Dr. William Roberts, of Manchester, England, in his Annual Address before the British Medical Association, last year, to assert that the Germ Theory of Disease "is now established upon a firm experimental basis, and if fairly grasped in capable hands, will very soon give us most important aid in our struggle with disease;" and a recent eminent German writer on Pathology, Professor Orth, late of Berlin, now of Gottingen, declares "of all the modifications which the blood undergoes, the least understood and at the same time the most important, is unquestionably, that which is due to the admixture with low organisms. Recent researches leave no doubt whatever, that in some diseases the blood contains during life, though to a far higher degree after death, certain low forms of animal or vegetable life. Those organisms which have a thoroughly characteristic appearance can be detected without any great difficulty, with very high powers, provided the layer of blood which is examined be very thin, or that the red corpuscles have been destroyed with acetic acid or alkalies."*

*Dr. Orth describes the gray coating on wounds affected with Hospital Gangrene, and lining the uterus in puerperal fever, as being made up cheifly of micrococci and bacteria. He also asserts, what I long ago believed and taught, that in metastastic abscesses, and probably in carbuncles and boils, the starting point of the slough which forms the core, is found in a small artery plugged up by a little wandering mass of micrococci or fungous spores.

The latest, and perhaps most important, advance toward actual proof the Germ Theory, has just been made by my friend, Professor E. Klein, F. R. S., of London, who, in a series of admirable investigations, partly communicated to the Royal Society in February, 1878, shows that a kind of Bacterium found in the peritoneal exudation of pigs affected with the disease sometimes called typhoid fever (but more properly entitled *Pneumo-enteritis contagiosa*), may be cultivated in indifferent fluids outside the animal's body *for eight successive generations*, and then produce the original malady in healthy animals upon which it is inoculated.

The daily success of Lister's Antiseptic Method of Dressing Wounds, now firmly established in the London and many of the Continental hospitals, is a further and almost unanswerable evidence of the infective power of germs, and the wonderfully lucid explanations and ingenious experiments of Professor Tyndall have done much to enable all to realize the intimate relation which exists between Dust (which consists largely of germs) and Disease.

It may not be amiss, before leaving this part of my subject, to reply to an objection which has been frequently offered to observations upon Bacteria, met with in connection with various diseases, namely, that such organisms, apparently quite identical, are often detected in absolutely healthy animals, and therefore can not be causes of disease. Those who urge this argument, however, seem to forget that since the Bacterial spores and rods are only the analogues of the seeds and roots of larger plants, and by no means entire organisms, it is, therefore, no more reasonable to expect us to distinguish the Bacterium which develops into the cause of Yellow Fever, for instance, from that which produces simple putrefaction, than it is to demand we should discriminate at sight, the root and seed of a choke pear, from those of a seckle. In either case it may be only by cultivating the plant to its full perfection, and testing its ripe fruit, that we can determine its place in nature.

Abandoning, as I said before, all claim at present to certainty that the Germ Theory of Disease is true, let us consider in conclusion, what modifications of the ordinary sanitary precautions we can wisely adopt in view of the *probability* that Bacteria, or closely allied organisms are the actual causes of constitutional diseases.

In the first place, it seems to me that great benefit would result from its being understood by every man, woman, and child, that the contagion of small-pox, scarlet fever, typhoid fever, yellow fever, measles, diphtheria, cholera, etc., is probably composed of exceedingly minute spores, or seeds, so small, that 20,000 of them placed end to end, would measure less than one inch in length, and a mass the diameter of one of the periods (.) upon this printed page might contain 50,000,000. Each one of these 50,000,000 of seeds is capable, under favorable circumstances, of reproducing its kind with almost inconceivable rapidity; so that, supposing, for example, the Zygodesmus of Professor Letzerich is really the morbific agent causing diphtheria, a particle of the grayish false membrane of the size of the dot just mentioned, would contain separate seeds enough to infect every inhabitant of the whole continent of North America with dipththeritic disease. But, whilst this is the theoretical possibility, practically, the same law of prodigality of nature exemplified in the spawn of the herring and salmon holds good, and not more than one spore in a thousand, a million, or a hundred million, perhaps, has an opportunity to reproduce its species.

As there is no doubt that the contagion of the diseases just enumerated may penetrate into our systems by the air we breathe, the food we eat, and especially the water we drink, it is obvious that only the most scrupulous care can save us from these extremely minute seeds, or insure their destruction after entrance into our bodies is accomplished. If these germs were singly disseminated, it would be almost impossible to avert constant infection, but as they generally are carried about by winds or currents in aggregations of thousands or ten of thousands, of course the chance of imprisoning them, or otherwise shielding ourselves from them, is largely increased. It seems probable that the epithelial cells continually shed from our integument and constantly floating about in the atmosphere in great numbers, and which, as shown in some observations of my own, upon the white incrustations upon brick-house fronts, are met with in the dust deposited upon the highest points of four-story buildings in crowded thoroughfares, are often vehicles for small groups of these spores which adhere to them.

The obvious deductions from these facts tend to strengthen the urgent recommendations of sanitarians, that every effort should be made, first, to prevent these morbific germs from being let loose upon the world, and second, when they have made their escape into the free air or water, to destroy all spores likely to come in contact with unprotected persons; that is to say, human beings from whose bodies one crop of small-pox (or cow pox), fungus, yellow fever, bacteria, relapsing fever spirilla, etc., has not already been raised.

Each individual affected with small-pox, scarlet fever, diphtheria, or any other of the diseases above mentioned, is, according to this theory, to be looked upon as a sort of *hot-bed* or forcing-house for the seeds or spores of that malady. From his or her body are continually given off, in all directions, by the skin, the breath, the perspiration and other secretions, millions of spores of the extreme minuteness I have described to you, each one of which, if it were received into a human system, under favorable circumstances, would rapidly reproduce itself, and after a few days or weeks (corresponding, as already mentioned, to what is known as the period of incubation) give rise to a new case of the disease, again a new hot-bed of contagion for other unprotected organisms.

Now these spores, just like the seeds of larger noxious weeds, which, when allowed to gain a foot-hold in our fields and gardens, propagate themselves with such immense rapidity, have no power to move of their own accord, and can only develop if they meet with air, moisture, and congenial soil suited to their peculiar requirements. That is, if a small-pox patient is shut up in a germ-tight room so that the seeds can not escape, or, if whilst in the open air that air is stagnant, so that no seeds are wafted away from the immediate neighborhood of the individual, or, if when carried along by the wind, they are blown away from any human habitations, are dessicated in a dry atmosphere, baked by the sun's rays or artificial heat, frozen by extreme cold (as seems to be the case with yellow fever germs), or finally, if they happen to meet with no persons but those who have had small-pox or been sufficiently vaccinated, in other words, if they do not "fall upon *good* ground," all this wealth of provision by which nature tries so hard to secure the perpetuation of the poisonous plant, causing small-pox in our systems, becomes unavailing, and her malevolent design against our race, carried out with such a prodigality of murderous weapons, utterly fails.

This brings me to the notice of one of the most common and most mischievous popular errors which a general acceptance of the Germ Theory will necessarily subvert, namely, the belief that small-pox and other contagious maladies often arise without previous exposure to the seeds of the disease. This doctrine, frequently advanced in private life as an excuse for neglect of proper care and caution in regard to children, etc., and occasionally sustained by public authorities as an apology for violation of quarantine and other sanitary regulations, is exceedingly pernicious, and our warmest gratitude would be due to the Germ Theory of disease, even should its establishment render no other service to humanity than the explosion of this fallacy. The fact is, as I firmly believe, that (inverting the Scriptural aphorism), we can no more gather thorns from grapes, or thistles from figs, than we can have, for instance, the germs of yellow fever growing from clean cotton, or those of cholera developing from uninfected rice.

Putting aside the primary origin of diseases, which, with one or two doubtful exceptions, is a question of prehistoric time, the Germ Theory of disease teaches us that every new case of the contagious maladies, already enumerated, is the immediate offspring of a preceding case, and the direct result of exposure of an unprotected human being to the chance of having the spores or seeds of disease implanted in its system, an exposure which it only required sufficient knowledge, sufficient foresight and sufficient care to avoid.

This pernicious belief, as I deem it, in the spontaneous endemic origin of the contagious diseases rests, at any rate, on entirely negative evidence, namely, the circumstance that cases do sometimes spring up in which it is impossible to trace the affection back to a personal source of specific propagation, and yet, such an event is only what we have reason to expect from the very nature of these diseases, since the active principle of the poison is invisible to the naked eye. Hence, in the ordinary affairs of life, unless special precautions are resorted to, ways are open for the spread of these microscopic agents of propagation in a thousand unseen modes, so that, obviously, the precise source of infection and its track must often remain undiscovered by the best wisdom of man. I have seldom been more forcibly impressed with this truth than when, upon one occasion a few years ago, a stalwart man entered, in his turn, my prescribing-room in the Pennsylvania Hospital, and on his lifting his hat I saw his forehead was covered with well-filled pustules of small-pox, at about the sixth day of their development. In reply to my reproof for thus exposing other patients in the waiting-room of the Hospital to this terrible disease, he assured me (mendaciously, I presume), that he did not know what was the matter with him, and that, being a stranger in the city, without home or friends, he had, when taken sick, come to the Hospital, since "he must have some place to go to." I hastened him off to the office of the Board of Health, whence he was doubtless forwarded to the Municipal Hospital; but the point of interest in this connection is, that if, as is probably often the case, there had happened to be in that waiting-room an unvaccinated child upon whom the infection from these pustules was propagated, no one connected with the infant could have suspected the source of contagion, as my small-pox patient had his hands concealed in gloves and wore a full, heavy beard, which, with a hat pulled low down over his eyes, effectually shielded his loathsome disorder from observation.

Of course this is not an isolated case, but only an example of what we all, young and old alike, are constantly exposed to in the streets, the cars, and all public places in a large city. I can not but hope, however, that as soon as our legislators become convinced that the Germ Theory is true, we will have what our English cousins enjoy the advantage of; *i. e.*, stringent laws to prevent such culpable injury to innocent persons. Meanwhile, our only safeguard is to protect those under our care by the precautions of early vaccination and the most watchful seclusion from possible exposure to the sphere of influence of such contaminating individuals, who constitute, as I consider, hot-beds for generating the tangible seeds of disease.*

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*Some years ago a medical friend of mine attended, in a large town not a hundred miles from New York, two successive cases of small-pox in the

In all such instances, indeed, isolation from unprotected persons, carried out with every due consideration and kindness, is, therefore, to be practiced, if possible, and under other conditions, means which will destroy the life of the spores, such as dry heat of high degree, superheated steam, prolonged boiling in water, caustic acids or alkalies, are to be used, with a firm confidence that if they are employed thoroughly enough they will absolutely put a stop to all spread of disease.

A very important suggestion in regard to the use of disinfectants, arising from our knowledge of the Germ Theory, is, that since these spores doubtless float in the atmosphere, as do the seeds of the thistle or dandelion, and are no more susceptible to the action of chemicals, with which the air containing them is inpregnated, it is useless to expect any certain and complete results from the milder ærial disinfectants, as usually employed, that is, by scenting the medium in which they are suspended with carbolic acid, camphor, acetic acid, and similar, non-corrosive agents.

As to the lesson we may deduce from these teachings in regard to Public Hygiene, I think its importance is only surpassed by its simplicity.

For such contagious and infectious maladies it is: *Avoid, at any cost, the entrance into communities of living spores or seeds of disease.* And this should be insured, not as in former times, with the mere *hope* that somehow we might escape the visitation, but with the absolute certainty that with proper care infection can not occur.

No doubt many of us have smiled at the story of certain terror-stricken authorities in a German town, who, when a single potato-bud was discovered in a field near them, immediately covered the whole plantation with straw soaked in kerosene, and, setting fire to it, destroyed every vestige of animal and vegetable life for acres around. An yet, if we consider a moment, we realize the fact that this apparent waste of time, trouble, and potato

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house of a dealer in ready-made clothing. The whole stock of coats, pantaloons, etc., numbering many hundreds had an opportunity of being impregnated with the seeds of the complaint, and should have been disinfected with scrupulous care. They were, however, sold at retail, just as usual, and may have given rise to scores of cases of "idiopathic" (?) small-pox.

vines, was the wisest and most economical expenditure that could possibly have been made.

How much more, then, when our own lives and the lives of those that are dear to us, in addition to scores of millions of dollars are at stake, as they are now in the South, should sanitary authorities be armed with almost despotic power, in order that they may shut out, or kill every one of these actually visible and even tangible seeds of disease. Quarantine, disinfection, and prolonged detention of persons, with disinfection, or frequently total destruction of goods from infected districts, is, it appears to me, the *right* of the many at the expense of the few; and even if, as I should advocate, for the sake of strict justice, ample compensation for loss of time and loss of property were allowed by law to those who suffered, I believe the community at large would be tenfold better off pecuniarily, to say nothing of the far more important saving of human life and human suffering, which would be secured.

SELECTIONS.

Miscellaneous Surgical Notes from Berlin.

As a place for the study of surgery, and the witnessing of surgical operations, Berlin is undoubtedly the very best point in all Europe, and hence probably the best in the world.

Other cities have as much or more surgical material, but it is generally, as here in London, so divided between different hospitals and different operators, that it is impossible for one to witness it all, or to be benefited by it, to such a degree as at "Langenbeck's Clinic" in the German capital. For from two to four hours each day, for six days in the week, you can witness here every variety of surgical operation, from the opening of an abscess to those the most grave known to the domain of surgery.

To-day Prof. Langenbeck is to surgery in Prussia, what no other man is to this branch of medicine in any other country.

Although he has introduced and is really the father of many of the great operations that he performs, he is a man without a hobby, and never speaks of any procedure as being an invention of his own. While Pean, Gosselin, and Verneuil seldom quote anything but French authority, and Bryant, Lister, and Paget are partial to British authors, Langenbeck is as cosmopolitan in the sources from which he draws his knowledge of the branch that he teaches, as the universe itself.

As a didactic teacher, he never would have been a success in America, where a certain eloquence of delivery is considered so essential in the lecture-room. In lecturing, he often hesitates, and will sometimes stop for several seconds between the phrases of his sentences. In treating of any surgical procedure of importance, he first gives the views and teachings of others, and then compares the same with his own experience; which, taking the whole field of surgery together, is probably the most varied and extensive of any man's now living. While Pean, of Paris, does only the most important part of his surgery, leaving the closing and dressing of wounds to his assistants, Langenbeck attends to every detail himself, ties every artery and puts in every suture.

AMPUTATION OF THE FEMUR.

A man, aged thirty-six years, suffering from a malignant disease of the lower end of the femur, was brought into the ampitheater, and while the assistants were administering chloroform to the patient, and making other necessary arrangements for the amputation, Prof. Langenbeck made the following general remarks on the subject:

"Where it can be done, I make *side* flaps, instead of antero-posterior ones, as is generally done. I do this, first, because a better drainage can be effected after the operation, and second, because I believe any resulting cicatrix is more likely to be situated at a point that will render it less liable to be irritated by the friction connected with the movements of the stump.

"Again, I make my flaps *entirely* of skin and its immediately adjoining tissues. I want no muscular tissue overlapping the end of the bone. If you have a long muscular flap, it is sure to either slough away or gradually become absorbed. If it should slough, it immediately complicates your case by adding to the dangers from septicæmia."

When he had made his skin flaps he then made a section of the periosteum, extending half way around the shaft of the bone, and six centimeters in length. Having peeled this carefully back, he had a perfect covering for the end of the bone, after the later was sawn off. He says, that since he has adopted this mode of procedure, he has never had a single case of secondary disease, such as caries or necrosis, following his amputations. When he had sawn off the femur, and brought the skin over the end of the stump, lo! his flaps were so short that they would not come together without considerable tension. He remarked: "As you see, gentlemen, the end of my bone is little too long, or my flaps are too short, and, as I can not lengthen the latter, I shall have to shorten the former;" and without another word of explanation he proceeded to saw off another six centimeters from the end of his stump.

Before he closed the wound, he applied eighteen ligatures, all of which, except the one to the main branch of the femoral artery, were of carbolized catgut. These ligatures of course were all cut short and left to be absorbed; and I have never seen him leave the long ends of ligatures out of a wound with a view to their future removal. A drainage tube was introduced into the inferior and superior border of the stump, and the whole was sewed together in the most painstaking manner. The stump was dressed with Lister's antiseptic dressing, the whole operation being done under the spray. The operation lasted one hour and ten minutes. In contrast with this time, I have seen Prof. Jas. R. Wood, of New York, do this operation complete in five minutes, making his flaps and sawing off the bone in forty-five seconds.

The result of this operation was most satisfactory indeed. The whole wound healed by first intention, and the patient never had a temperature above 37.5, and never suffered any considerable amount of pain.

In speaking of the rapid recovery of this case, Prof. Langenbeck said that he attributed it mainly to the painstaking manner in which he had arrested *every vestige* of hemorrhage before closing the wound. He believed that in the vast majority of cases where a constitutional reaction followed surgical operations of this kind, and which we had formerly been taught to look upon as having its origin in an inflammatory reaction, was in fact of a septic character, and that a decomposed blood clot situated at the extremities of open blood-vessels, was the very best possible condition for generating such a process.

PROLAPSUS ANI.

A boy aged six years was brought into the clinic, suffering from this affection. It had troubled him for two years, but until within the last month the gut only came down at the time of the stools. For the last four weeks it had been down constantly, and neither the mother nor her family physician had been able to replace it. In connection with the case Prof. Langenbeck said: "In this disease I have been able to cure *every case* in which I have instituted the treatment I shall adopt in this one, where the patient has been above three years of age.

"Why I have not been equally successful in those of more tender years, I can not tell, but am disposed to attribute my failures to the fact of younger children being less manageable, and their pressing down efforts when they cry."

His treatment consists in the injection of ergotine into the cellular tissue beside the rectum. He passes the hypodermic syringe parallel with the gut to the depth of about three centimeters, and injects about twenty minims of the solution into each point, usually making the injection at two or three places around the sphincter.

As the mucous membrane of the prolapsed gut in this case was very relaxed and superabundant, he made three parallel incisions through it, about four centimeters in length, with the thermocautery, with a view of producing a cicatricial growth that would contract the parts when it healed. This last procedure he did not consider essential to the treatment, but it would probably hasten the cure. The gut was now replaced, and the boy put to bed, and the cure was complete, as the bowel never again came down.

I have been most highly pleased to witness Prof. Langenbeck's operations upon the uterus, and in listening to his lectures upon this subject, not only on account of his wide range of personal experience, but also on account of the fact that I look upon him as a man who is the least influenced by any special hobby of any man that I have ever seen operate on that organ.

UTERINE POLYPI AND FIBROIDS.

I saw him operate on a woman for the removal of a uterine fibroid polypus that had descended into the vagina and filled this organ so completely that the evacuation of both the rectum and bladder was completely obstructed.

The growth was so large that he was unable to pass the ecraseur over the entire mass to its cervical attachment, and hence he had to pass the chain of the instrument around its lower segment, and remove it in three separate portions.

The last was so large that he had to extract it with a pair of obstetrical forceps. He said: "Whether these growths be solid, soft, or cystic, there are only three modes of removing them that I recognize as proper to adopt, and these are, the knife or scissors, the ecraseur and the galvano-cautery. When they are attached high up in the uterus, I do not like the galvano-cautery, for the reason that you can never be really certain what you are burning, and you may destroy tissues that will lead to disastrous consequences."

The use of the ligature for the removal of these foreign bodies he especially condemned. In the early years of his professional life, he had seen two patients die of septicæmia following the removal of a uterine polypus in this manner.

We must remember, in all our operations upon the uterus, that although we have to do with an organ that will tolerate a good deal of mechanical violence, that we have also to do with a mucous surface that will the most rapidly absorb effete matter of any tissue in the entire body; and that when a polypus is ligated it soon becomes a putrid mass, from which the whole economy may become rapidly contaminated. The twisting off of polypi he also considers a bad practice, and has seen at least one case where the extensive laceration of the mucous surface of the womb attending the operation resulted in a metritis from which the patient died.

Prof. Schroder had in his wards at the Charite, this winter, some interesting cases to illustrate his management of different forms of uterine fibroids. In our treatment of these cases, he says, we should remember one fundamental rule, which is, that in the history of every such case there usually comes a time when the morbid growth will cease to increase in size, begin perhaps to undergo a retrograde metamorphosis, and become in time entirely innoxious as far as the well-being of our patient is concerned. Directly opposed to this are the facts connected with the history of most cases of ovarian cysts. Their tendency is ever to increase in size, and their removal will sooner or later be imperatively demanded. Keeping these facts in view, we seize upon the most appropriate time for our operative interference. In the management of a case of uterine fibroid, he says, investigate your case accurately as to this fact. Is its attachment situated upon the lining membrane of the *body* of the womb, or upon the cervix uteri? If it have its origin from the body of the womb, you are to consider it as a *noli me tangere*, unless it be the direct cause of symptoms that are likely to prove dangerous to the life of the woman. On the other hand, if it spring from the cervix uteri, you may operate on it in almost any way with comparative safety.

To arrest the hemorrhages that accompany these cases, he swabs out the inner surface of the womb with either the tincture of iodine or a solution of one of the astringent salts of iron.

A question in which I have been greatly interested, and upon which I have interviewed everybody, is the value of the hypodermic injection of ergotine in the treatment of uterine fibroids.

Prof. Schroder says that he has often seen cases greatly benefited by this treatment, but has never seen a case entirely cured by it. By its use the hemorrhage will often cease, and the tumor become greatly lessened in size. To test the remedy he says you must use at least one hundred injections. He makes them into the cellular tissue of the abdominal walls, and repeats them as often as every alternate day. As so protracted a use of an agent that is often very painful, taxes to the utmost the patience of both physician and patient, few carry it out thoroughly.

Braun, of Vienna, makes these injections into the outer aspect of the thigh, where they are better borne. He uses also Bourbellon's ergotine, and none other, as he says you never have an abscess follow its use. Its name, I believe, is derived from a Swiss chemist who manufactured it.

Dr. Routh, of Dorset House Hospital for Women and Children, in London, is the greatest enthusiast of any I have met in Europe as regards the efficacy of his treatment of intrauterine fibroids. His plan is to first puncture the tumor by passing a sharp-pointed instrument into it about the size of a number six English catheter. The depth to which he makes this puncture will depend upon the size of the tumor, but will usually be to about one-half of the thickness of the growth. After making his puncture, he introduces into the hole thus made a wire of nearly the same size, heated to a red heat. He claims that in this way you can excite an inflammatory change in the body of the fibroid that will lead to its absorption, and that too without any of the dangers of a septic process following the procedure, which would be likely to occur if you attempted to accomplish the same object in any other way. He says that he has never failed to benefit a case that he has treated in this manner.

He was surprised when I told him that I had seen Prof. Pean, of Paris, carry out the same idea in the management of some cases at St. Louis.

AMPUTATION OF THE CERVIX UTERI.

Of the various modes of doing this operation, Prof. Langenbeck prefers the knife or the scissors. The ecraseur, he says, should *never* be used for this purpose. He relates a case that occurred in his clinic, when Prof. Billroth was his assistant, in which, although he applied the instrument with great care, and kept his finger on the chain during the whole operation, Prof. B. tightening the screw, a portion of the bladder was included in the incision, and the patient died two days later of peritonitis. The objection that Prof. Langenbeck has to the galvanocutery in this operation is, that you can never be positively sure as to *just* how much tissue you are removing.

On the other hand, since I have been in London I have seen Prof. Barnes amputate the cervix twice with the ecraseur. He used the instrument without a speculum, being guided wholly by the index finger of each hand, which he kept in contact with the chain.

After the cervix is removed, he applies the thermo-cautery, to arrest any hemorrhage that may exist. This, he tells me, is his *uniform* mode of doing this operation, and that he is perfectly satisfied with his results. Prof.

Barnes brought out a patient and laid her on the operating table, telling me as he did so, that he was going to show me the American operation (Emmet's).

But on examining the cervix, and seeing it very red and congested, he concluded that he would wait a few days, until the congestion in the parts subsided. In fact, he feared the hemorrhage that would follow. I could but contrast his timidity with the confidence with which some German operators would have attacked these parts with the knife, without the least fear or hesitation.

I have seen the amputation of the cervix done with scalpel about forty times during my stay in Berlin, and not a single instance have I seen any serious trouble in arresting the bleeding. Dr. A. Martin, of this city, read a paper last year before the gynæcological section of the German Medical Society, on "The Therapeutics of Chronic Metritis," in which, after going on to state that as all medication, both local and constitutional, had proved of no avail in the management of this disease, he had been induced to resort to an operative procedure for its cure, which operation consisted in an amputation of the cervix uteri.

At that date (August last) he had done the operation one hundred and nine times. Of these patients, seventy-two suffered from a simple chronic metritis, one-half of which number he had had under observation and treatment for many months without the least improvement in their condition. Twenty-six were performed for a cancerous condition of the cervix, and eight for a local hypertrophia of one or both lips of the neck of the womb. Of these cases, only two died as a direct result of the operation. One of these was very anæmic from loss of blood before the operation, and died of septicæmia soon after. The other proved fatal from the supervention of typhoid fever.

His mode of doing this operation is to cut away a portion somewhat funnel-shaped, the base below and the apex above, of from three to five centimeters in length, depending upon the length of the uterus, as measured by the sound before he operates.

I have followed Dr. Martin carefully for nearly four months, and have seen him and assisted him at this operation more than thirty times; and while I am perfectly sure that no ecraseur nor galvano-cautery can do this operation so well as does his knife, I am sorry to be compelled to believe that, like some other of our noted gynæcologists, he is bent on doing "*his*" operation as often as possible, and so submits many a poor woman to this treatment, who might be relieved by a more simple procedure.

Unfortunately, like many another celebrated operator, he is inclined, I fear, to keep in the background as much as possible the accidents that follow his treatment.

I saw a woman in the service of another gynæcologist of Berlin, operated on for complete occlusion of the os uteri and hæmatometra, that followed an amputation of the cervix by Dr. Martin.

When I related the case to Dr. M., he said that this patient was one of two who had had secondary hemorrhage following the operation, and he attributed this bad result in her case to the extra stitches that he had had to put in, in order to stop the bleeding, as well as having left his service and passed out from under his observation sooner than she should have done. Prof. Schroder's mode of amputating the cervix, and which Prof. Lagenbeck recommends, is, in my mind, at once the most simple and easy of execution of any of the numerous modes of doing this operation that I have seen tried. Dr. Martin, however, objects to it because the resulting stump is somewhat flat, while when done after his plan (Dr. Martin's) the stump is conical in shape. Prof. Schroder's reply to this is, that nature has to re-shape the parts after any cutting procedure of this kind, and that in the end his operation leaves as natural a cervix as any other. To do this operation Prof. Schroder places his patient on her back, her thighs flexed upon the abdomen and the legs upon the thighs. (I have never seen a German operator place a woman in Sims' position.)

A Simon's speculum is next introduced, and the perineum pressed well down. A Hegar's irrigator containing a five per cent. solution of carbolic acid is now made to throw a constant stream of this fluid upon the cervix uteri during the entire operation. In fact, Prof. Schroder claims to make this operation strictly antiseptically, substituting the fluid carbolized solution for the spray. A pair of scissors are now introduced into the os uteri, and the os incised as high up as the vaginal insertion on each side. The cervix is thus divided into two flaps, and while an assistant pulls down upon and steadies the womb by means of a pair of forceps made fast to one flap, the surgeon seizes the other and amputates it rapidly with the knife, cutting, of course, from below upward, so that you have left after the amputation a somewhat long flap-shaped mucous membrane to cover the stump.

By means of a curved needle, armed with a heavy silk ligature, two sutures are now passed from the vaginal mucous surface of the stump into the os. These sutures are each placed one centimeter from the median line at their point of entry into the vaginal walls. They are now tied tightly, and serve to render the os uteri patulous, as well as to pull down and hold the womb firmly, while the other lip is being cut away in the same manner. From three to four stitches are next applied on each side of these central ones, and the operation is completed. The vagina is now tamponed well with salicylated cotton, which seals up the wound and makes the whole procedure antiseptic.

With the uterus thus firmly held, and with a needle curved to a semicircle and armed with a silk thread, there is but little difficulty in passing a suture through the muscular walls of the uterine stump in such a manner that when it is tightly tied it will include any bleeding vessel and effectually arrest any hemorrhage.

German operators do not use the silver wire for sutures, either for this operation or Emmet's, as they claim that the silk answers every purpose, and is much easier to apply and remove.

Prof. Langenbeck lays down one very emphatic rule as to the use of styptics to arrest hemorrhage where operations have been done in the vagina, and where the probabilities are that the peritoneum has been encroached upon. *Never*, he says, use preparations of *iron* for this purpose. He relates several cases where he used a solution of iron, and after his patients died of peritonitis he found that the walls of the peritoneum had sloughed away from the effect of his styptic. He believes that even a moderately strong solution of iron will cause a necrosis of any serous membrane to which it is applied.

Prof. Freund, late of Breslau, but now called to Strasburg to fill the place of Prof. Gusserow, appointed as Professor of Midwifery in the University of Berlin, spent a month in the latter city this winter. As the reader perhaps knows, Prof. Freund is the father of the revised method of extirpation of the entire uterus through the abdominal walls.

I saw him operate on a case for Dr. Schroder just before I left Berlin. The patient was alive four days after the operation, but her recovery was considered doubtful. I saw him begin another operation of the same kind for Dr. Martin, but after making his abdominal incision, he found the pelvic glands so invaded by cancerous infiltration that he would not attempt the removal of the uterus.

He closed up the wound, and Dr. Martin then performed his amputation of the cervix uteri as a palliatory expedient. This poor woman had a good deal of constitutional disturbance, but was convalescing the last time I saw her, ten days after the operation.

Prof. Freund has done this operation of the total extirpation of the womb twelve times and has had seven recoveries, while in Dr. West's tabulated twenty-five cases there occurred twenty-three deaths.

The enucleation of the womb entire through the vaginal walls. of which a lately published case is reported by Prof. Lane (I believe), of San Francisco, Prof. Langenbeck considers an anatomical *impossibility*.

He says, that while you may with considerable facility separate the *cervical* portion of the womb from its attachment, that when you reach the *body* of that organ, you can not separate its muscular tissues from its peritoneal coating without the greatest difficulty, even when you have the uterus removed from the body and dissect with the greatest care, and as an operative procedure upon the living body he does not think its accomplishment possible.

TRACHEOTOMY.

A child six years old was brought into Prof. Langenbeck's clinic, and being placed upon the table, he said:

"Gentlemen, you would scarcely imagine on looking at this little boy and seeing how little his respiration is embarrassed, that I am about to open his trachea."

The patient was suffering from diphtheria, and had twenty-four hours previously developed a croupy cough. Prof. L. laid it down as a rule, to which there should be no exception, that in the management of these cases that you should operate before signs of extreme dyspnœa and blood poisoning come on. Waiting will do no good, for with an almost absolute certainty tracheotomy will be necessary, and the longer you wait the less are your chances of success. The operation itself is not dangerous unless done when the patient is in extremis. Since 1870 he has done this operation seven hundred times in this clinic. In some years he has saved as high as 40 per cent. of his cases operated on, and in others only 10 per cent.

He was not able to explain why there should be this great difference in the mortality of his cases in different years; but one fact he did know, and that was that since he had given out word to the physicians of Berlin that they should send their diphtheritic patients earlier for this operation, that his success had been much better.

In the City Hospital of Berlin diphtheritic patients are kept in a ward adjoining that devoted to the chronic diseases of women. On making one of my evening visits to this institution with Dr. Alberts, physician in charge, he showed me a boy ten years old who had just been brought in with this disease, and upon whom he proposed to perform the operation of tracheotomy if the case did not improve after one hour.

I administered the chloroform, and the doctor cut down through the skin and underlying fascia, and with great care separated, as he thought, the two lobes of the thyroid gland with the handle of his scalpel, and finally reaching what he thought to be the trachea, made an incision into it. No air escaped, though he pulled the edges of the wound open with a pair of forceps. The true condition of things now flashed over him in an instant. He had gone outside of and behind the trachea, and had opened into the œsophagus. After waiting a few moments and expressing his great horror at what he termed his *extreme stupidity*, he opened the trachea and put in the tube. With even this mishap this case did well as far as the operation was concerned, though the patient died five days later from extension of the diphtheritic process into the bronchi. The boy was not given any nourishment by the mouth for twenty-four hours, but after that time he was given fluid nourishment, which passed into the stomach without hindrance.—*W. S. Caldwell, in St. Louis Medical and Surgical Journal.*

Jaborandi in Pleuritic Effusions.

[A. Laramée. L'Union Médicale du Canada, January, 1879.]

Before coming to the main point, the author gives a brief history of this medicine. Jaborandi (*pilocarpus pinnatus*) is a shrub, eight or ten feet in height, with leaves alternate, pennate, compound, growing in the north of Brazil, near Pernambuco. It bears flowers and fruit, but up to the present, only the leaves, it seems, have been experimented with in therapeutics.

The active principle of jaborandi, pilocarpine, was discovered by Hardy in 1875. This alkaloid, known under the name of nitrate or muriate of pilocarpine, is high priced; but, on the other hand, an exceedingly small quantity, three centigrams, equals four grams of the leaves in infusion. The most common and economical plan of giving jaborandi is to give the infusion of the leaves, which is prepared by infusing four grams of the bruised leaves in a cup of boiling water for quarter of an hour, and give to the patient immediately afterward.

It is also given in the form of fluid extract in the dose of thirty drops to four grams, and in pills of twenty centigrams, each pill equaling four grams of the leaves. The muriate and nitrate of pilocarpine are often used for hypodermic injections in the proportions of sixteen milligrams.

All the doses mentioned may be increased. The leaves furnish a large quantity of essential oil, but it has not yet been experimented with.

General opinion attributes the discovery of jaborandi to Dr. Continho, of Pernambuco. This gentleman having experimented with it, and having recognized sialagogues and sudorific properties in a high degree, sent some samples to France in 1873.

The contradictory reports, which have circulated for some time, regarding the effects of jaborandi, arise from the fact that a plant coming from South America and bearing the same name was confounded with the true plant, but it is now certain that the true species is the only one exported to Europe and the United States.

Prof. Gubler, at the Beaufon Hospital, Paris, experimented with it on a large scale; and some months later, MM. A. Robin, Vulpian, Hardy, and several others, carefully studied jaborandi, especially its physiological properties. All recognized in it a powerful action on the salivary and sudoriferous glands. Since then jaborandi is regarded as the most energetic sudorific and sialagogue with which we are acquainted.

Under the action of this medicine, five to fifteen minutes usually, but never later than twenty-five minutes after its administration, salivation and sweating take place and go on increasing. Salivation, which begins first, ceases generally at the end of two hours, and the sweating a little later. The patients are tormented by a continual spitting, and frequently by nausea, and even vomiting, especially if they swallow the saliva. The salivary glands are then more or less swollen and at times painful. Sweating is less marked in persons subject to gastric disorders and constipation, but more free in those subject to sweating.

The temperature of the body is not sensibly modified. Sometimes vertigo comes on, but it is only temporary.

M. Gubler has noticed secondary actions, such as hypersecretion, from the lachrymal glands, from the nasal membrane and from the pharyngeal, tracheal and bronchial glands.

M. A. Robin observed that the day of the experiment the urine diminished notably, but the day after there was a considerable increase. However, other things being equal, it may be said that the reduction of the amount of urine is not proportioned to the loss of fluids from the skin and salivary glands.

There is a marked antagonism between jaborandi and atropine. At the University College, London, they succeeded with six milligrams of nitrate of pilocarpine in producing an abundant salivation, and with 3-10 of a milligram of atropine it was arrested. At Paris, M. Vulpian succeeded in preventing salivation and sweating in one of his patients, to whom he had given a few minutes previously a milligram of sulphate of atropine.

One drop of solution of nitrate of pilocarpine (in the proportion of sixty-five milligrams to thirty grams of water) is sufficient to produce contraction of the pupil when dropped in the eye.

The above are the most important physiological properties of jaborandi. The author gives the two following cases to illustrate its action in pleuritic effusions:

The first case, in December, 1877, was that of a man aged forty years, the subject of pleurisy for about twelve days. All the signs indicating inflammation of the left pleura were present; pain in the side, dry cough, early effusion, producing dullness, which changed its position with that of patient, absence of respiratory murmur, bronchial respiration, etc. He had recourse first to the classic treatment, emetic, vesicants, calmatives, etc. He finally tried jaborandi, four grams of the leaves infused for fifteen minutes and given in one dose. Five minutes after, salivation began and lasted for nearly two hours. It was abundant; sweating less prominent, showing itself especially between the shoulders. There was some nausea, but no vomiting. The sensibility and swelling of the salivary glands were tolerably well marked. Nothing peculiar as regards secondary actions. The same day the patient felt much better, the dullness diminished sensibly, and the respiration was more free. Two days after, the signs indicating renewed effusion, a second dose was given; and this time the effusion disappeared permanently.

The second case was a lady of forty years. She had latent effusion on the right side of six weeks' standing when she entered the hospital. Jaborandi was given in the same dose and manner. The effusion was greater than in the first case. He had resource to jaborandi four times during twelve days. Sweating and salivation were abundant. There was some nausea and vomiting, swelling of salivary glands, and hypersecretion from lachrymal glands, and nasal membrane. A third and similar case was also cured in the same manner by the author. The author remarks that the first dose was more energetic than the following ones. Patients should avoid exposure to cold during the sweating. After the disappearance of the effusion the friction of the pleura was very distinct.

Prof. Combal thus formulates the action of jaborandi in pleuritic effusions:

1. Jaborandi is very useful in the treatment of pleuritic effusions of whatever age or however abundant the liquid.

2. Jaborandi causes most often the liquid to disappear very rapidly, and the friction sounds to be heard.

3. The effects of jaborandi are of short duration; the liquid often reforms with great rapidity. It is necessary then to insist upon the use of jaborandi, and usually the liquid may be made to disappear permanently.

4. But when once the liquid has disappeared and the

friction sounds have appeared, jaborandi becomes absolutely useless. We must then, more generally, to accomplish a cure, resort to tonic treatment, and sometimes to local applications of tincture of iodine for example.

M. Dujardin-Beaumetz has employed jaborandi with success in albuminaria, in which there was general œdema, continual vomiting, and scarcely sixty grams of urine passed a day. An infusion of six grams of the leaves in ninety grams of water was given by the rectum, and produced an abundant salivation and sweating. The patient was improved promptly.

Jaborandi also finds a use in asthma, especially in the humid variety.

* * *

Iodoform—Its Uses.

Mr. Wyndham Cottle, in the London *Lancet*, gives the following statements as to the therapeutic applications of iodoform:

As an Internal Remedy.—For the latter forms of syphilitic disease, especially of the tongue, iodoform has been highly recommended by Mr. Berkeley Hill, and also for naso-pharyngeal affections by Dr. Prosser James. A grain or a grain and a half, with extract of gentian, sarsaparilla, etc., in the form of a pill twice or three times daily, is advised. I have given it in many cases of syphilis. I must, however, confess my experience of iodoform, when administered internally, has not been equally favorable. I did not find the improvement I had hoped for in my patient's condition, while the most marked effects of iodine were very often induced—intense frontal pain, coryza, loss of appetite and sickness, with heightened temperature and quickened pulse. In one case these severe symptoms followed the administration of half a grain twice daily.

As a Local Application.—For some years in America, on the Continent, and in England, iodoform has been a remedy rapidly growing in favor both for venereal and primary syphilitic sores. Its advantages in these cases are attested by the highest authorities. Very useful is it also in most forms of ulceration, whether specific or not, and in almost any situation. It may be applied with advantage to ulcers of the legs, to rupial sores, to buboes that have become open wounds, to ulcerations of the vagina, uterus, etc. This agent has been highly spoken of as an application in cases of post nasal-catarrh, of ulcerations of the throat, of ozena, whether syphilitic or not. As a parasiticide it is serviceable, many cases of tinea tonsurans, sycosis, etc., improving under its influence. Most soothing, too, is it generally when used topically to malignant ulcerations. Indolent sinuses may often also be beneficially injected with solutions of iodoform.

Two points of clinical importance must, however, be borne in mind in the employment of iodoform. Though a local anodyne, it is in some degrees an irritant. It should never, therefore, be applied to an inflamed surface, since it is likely to cause irritation and pain. It is to the indolent ulcer, in which action is absent or deficient, that it acts so beneficially. And, again, iodoform is apt to inflame the sound skin that surrounds the lesion it is intended to benefit, if kept in contact with it for any lengthened period.

Many plans have been devised for applying this drug. On ulcers and venereal sores, previously cleaned and dried, it may, when finely powdered, be lightly dusted, a piece of dry lint being laid over it, and the dressing renewed night and morning, while the discharge is profuse, once daily being afterward sufficient. Tannin or fuller's earth may be mixed with the iodoform in any proportion if it is desired to moderate its action, equal parts of the ingredients being generally prescribed. Iodoform can also readily, by trituration, be made into an ointment with lard or vaseline, or any of the petroleum derivatives, five to twenty grains to an ounce of the base. This mode is especially useful when it is desired to make the application to internal cavities.

Iodoform is sparingly soluble in water and glycerine, somewhat more so in alcohol and warm oil, but readily dissolves in ether, and to still greater degree in chloroform. This property furnishes us with perhaps the most convenient and easy method of application. A solution of one part of iodoform in six to twelve of either of the last-named bodies is painted with a camel's hair brush over the surface to which it is desired to apply it. The solvent evaporates, leaving a film of iodoform, and in most cases the process should be repeated once or twice daily. To avoid the pain which this evaporation of the solvent is apt to produce in sensitive parts, such as the nasal fossæ, Dr. Woakes advised "iodoformed wool"—that is, finely-carded cotton-wool with which an equal weight of the drug has been intimately blended. A piece of this medicated wool is to be placed in the required situation, and allowed to remain there from one to twenty hours.

The extremely penetrating and disagreeable odor of iodoform is its chief objection in practice. I find this is best obviated by great care that none of this powerfully-smelling drug is dropped on the patient's clothes, that when applied it is as far as possible covered over, and in some degree it may be disguised when made into an ointment by prescribing with it some essential oil. Tannin, also, when mixed with iodoform possesses the peculiar property of in some measure removing its odor.

Treatment of Alcoholism.

Some of the most distressing cases we, as medical men, are called upon to attend are those of alcoholism, and it has, unfortunately, fallen to my lot during the last few years to have several, from time to time, under my charge. A good deal has been written by different persons with regard to treatment, but I do not think this ought to deter one from putting on record his own personal observations, since it is only by accumulation of evidence that proper conclusions can be arrived at. As far as I can see, there would appear to be three different stages in the disease, viz:

1. *Sleeplessness*, accompanied by a hard quick pulse; loss of appetite in the morning, and morning sickness.

2. *Drowsiness*, accompanied by a slow, somewhat compressible and excitable pulse; complete loss of appetite; and constant sickness. The blood has in it an excessive amount of hydrocarbon.

3. *Delirium*, accompanied by complete absence of sleep and the presence of horrible apparitions, especially at night. The pulse is small, quick, easily excitable and compressible. The blood is deficient in red corpuscles. Hydrocarbons are present in poisonous quantities; the brain undergoes little or no repair. The vaso-motor nerve influence is almost entirely lost. The treatment I have found beneficial in each stage is the following:

First stage.—Træ. rhei,	min. x.
Træ. card. co.,	ʒ ss.
Træ. hyoscyami,	ʒ ss.
Acid. hydrocyanic. dil.,	min. iij.
Sp. chloroformi,	min. xv.

Aquam ad℥j. quartis horis.

The prussic acid acts as a sedative to the stomach, heart, and brain. The hyoscyamus has also, to a certain extent, the same effect.

Abstinence from stimulants in this, as in the other stages, is strictly enjoined, but when I find it difficult to get this carried out, I allow a glass of claret three times a day. It is essential that the patient gets plenty of light and easily digestible food, and with this object I order Brand's essence of beef, milk and eggs beaten up together, and barley water. This diet is suitable to each stage. The only thing to be said is the more the depression the more the nourishment.

Second stage.—The treatment should be the same as just described, only it is as well to omit the prussic acid, as there is not the same excitement present.

Third stage.—Chloral should be given in thirty-grain doses every four hours, till sleep comes on, and then repeated as often as necessary. The nourishment should be by no means forgotten, and stimulants should be strictly forbidden.

If chloral is gone on with beyond a certain time, a sleepless condition recurs, when nux vomica and gentian should be given as follows:

Træ. nucis vomicæ,	min x.
Træ. gentian co.,	ʒ ss.
Ess. limonis.	min. j.
Sp. chloroformi.	min. xv.

Aquam ad ℥i. ter quarterve die.

This rarely fails to reinduce sleep, but if persisted in long after it has produced its effect, sleeplessness returns. When this is the case the tincture of gentian, calumba or chiretta should be given alone.—*Dr. Atkinson, in London Pract.*

New York Pathological Society.

Stated Meeting, March 12, 1879.

OVARIOTOMY.

Dr. Bozeman presented two ovarian tumors removed by him from the same patient. The interesting point in the specimens was the looping of the pedicle of one of the diseased ovaries around the round ligament of the uterus.

The patient, single, aged twenty-three, having a healthy family and personal history, first felt symptoms about a year before the operation. There was pain in the left iliac and in the lumbar regions; this increased and gradually was felt in the left groin, hip, and labium. At the same time a small tumor appeared in the left iliac region, which was rather sensitive and somewhat movable. This increased in size till the time of examination. It was then the size of a man's head. The uterus was normal in size, anteflexed, and inclined to the *left side* very much.

Upon operating, January 24th, in the usual way, under Lister, a non-adherent, multilocular cyst was discovered. The fluid was drawn off with a trocar and canula. It was then found that the pedicle was twisted seven times upon itself, and was also looped around the round ligament. This looping took place, evidently, when the tumor was small, and as it grew up out of the pelvic cavity it drew upon the round ligament, making it very tense. The pedicle was tied, severed, and left in the abdominal cavity. The other ovary, being considerably enlarged, was removed also, and the operation concluded without any complications.

The explanation suggested for this peculiar looping was, that there had been a prolapse of the ovary, as happens in ovarian hernia, but the ovary instead of entering the abdominal ring, dropped down into the triangular space between the round ligament and the uterus; it then gradually worked its way toward the recto-uterine space, and, as it increased in size, was lifted out of the pelvis, its pedicle in this way being carried under the round ligament. The twisting of the pedicle is not rare, but this is the first reported case where it was thus looped.

The patient made a good recovery and now menstruates regularly, although completely unsexed.

INTERESTING CASE OF UTERINE DISPLACEMENT.

Dr. Peabody exhibited the uterus, left ovary, and bladder removed post-mortem from a woman aged fifty years, and upon which theration of ovariotomy had been performed some time before at St. Thomas' Hospital, London. He gave the following points in the history:

Dr. Partridge was called to see a woman, and found her dying from exhaustion. She died four hours after. He found vagina occluded by a dense, firm, hard mass, so as to admit only only one finger. There was a fetid discharge from vagina. Diagnosis of cancer of uterus had been made by previous attendant. There was nothing to be done. Post-mortem examination showed broad ligament fixed at lower angle of a cicatrix in abdomen; uterus elongated about five inches, and distorted by constant traction. There was no tumor connected with uterus; no ulceration. Pelvis was filled with dense, firm mass, which proved to be only connective tissue. No enlarged glands; urethra surrounded by mass. Bladder distended to umbilicus, and very thin. No abscess found. Case is of interest in relation to the operation of ovariotomy for uterine displacement in case where ovaries are not affected. Dr. Koeberle, of Strasburg, relates a case in which irreducible retroversion of uterus gave rise to intestinal obstruction which could not be overcome, and in which permanent cure was effected by gastrotomy. Patient was twenty-seven years old; had suffered from obstinate constipation, having passed nothing from the bowels for four months. At intervals had fecal vomiting. For several months confined to bed. For two months nourished by milk alone. Abdomen was hard, and left flank filled by fecal masses of stony hardness. Rectum empty, and uterus completely retroverted. Condition attributed to a fall from a carriage six months previously. All efforts to replace uterus had failed, notwithstanding various and energetic treatment.

After trying enemata and drastic purgatives, Dr. P. resolved on operative interference—not on account of obstruction. Resolved, however, also, to cure displacement by excising one ovary and fixing its pedicle to abdominal wall, as in ovariotomy; uterus was removed from its place, not without some force, being impacted by intestines full of scybala, which lay above it. Intestines were kneaded by fingers to make scybala pass downward.

Left ovary was drawn out of lower angle of wound in abdomen, cut off, and pedicle fixed in wound. Convalescence was rapid, as after easy case of ovariotomy. A large quantity of hard scybala was passed spontaneously on first day, and enormous quantity after enema of senna on third day. Colic and vomiting disappeared at once, menstruation was normal, and patient enjoyed good health for four years. At end of that time she again came under observation with vaginismus, constipation, and vesical tenesmus. Profound hysteria had been established in consequence of reverse of fortune. Examination showed that uterus remained in a somewhat anteverted position, and use of sound showed that it was still firmly attached to anterior abdominal wall.

LIPOMA WITH CALCEREOUS DEPOSIT.

Dr. W. T. Bull presented a lipoma with calcareous deposit. The tumor formed a mass the size of a man's fist, hanging by a narrow pedicle from the anterior axillary fold of a woman fifty-one years of age. The growth, always painless, of twenty years' existence, presented all the features of a subcutaneous fatty tumor, except that at the lower part there was a lump of stony hardness as large as a horse-chestnut. It was removed by cutting pedicle with scalpel, No vessels bled. A longitudinal section (with knife and saw) disclosed a fibrous capsule inclosing fat tissue. The hard lump had an outer layer one or two lines thick of bony consistence, the rest of the mass like thick paste. Both parts found to consist of carbonate of lime by treating with sulphuric acid (under the microscope).

Dr. Post remarked that in lipomata of long standing, calcareous degeneration was not uncommon.

CHYLOUS URINE AND FILARIA IN BLOOD.

Dr. Satterthwaite presented a specimen of chylous urine in behalf of a candidate for admission to the society, stating that an interesting point in the history of the case, viz: the presence of filaria in the blood, had not been mentioned.

Dr. Abbe remarked that the case was one of much interest, as the subject was now receiving considerable attention from English observers.

It is eight or nine years since Dr. T. R. Lewis had reported his first observations on some fifteen cases of chyluria studied in tropical climates, where it was prevalent, and announced his discovery that the blood of patients with chyluria swarmed with a minute filaria.

So numerous were they, that a drop of blood obtained from pricking the lobe of the ear, or other part of the body, would commonly contain from one to six filaria.

These were of minute size—in length from $\frac{1}{150}$ to $\frac{1}{250}$ of an inch, and in diameter $\frac{1}{2500}$, and were regarded as an embryonic stage of some larger parasite, which, however, eluded discovery until within the past three years, when Cobbold, Lewis, and Carter each claim to have found mature filaria in blood clots and lymphatic abscesses of the axillæ of patients in tropical climates. The mature worm measures in length three and a half inches.

Dr. Abbe had himself observed two interesting cases of this rare disease. The first was in 1875.

The patient, who was twenty-eight years old, and a native of the West Indies, had had recurrent attacks of chylous urine during the previous eleven years. And a most remarkable feature of these attacks was, that each was preceded by the emission of a soft gelatinous lump, which *immediately* ushered in a flow of chylous urine.

When I saw him, he was passing urine that was as white as pure milk, which, upon standing a short time, would coagulate in the vessel so that it could be turned out like thin blanc-mange, and would retain the shape of the vessel. In the course of a few hours, however, this would disintegrate and liquefy. The addition of ether would instantly clarify it by dissolving the oil. Quantitative analysis showed eight grains of oil to the ounce of urine.

The daily amount of urine voided was from thirty-two to fifty-four ounces, and the maximum of oil thrown out by this channel daily, half an ounce.

Careful search of the gelatinous lumps, which proved to be very tough mucus, streaked occasionally with blood, revealed the filaria, which I often found as numerous as thirty or forty in a small mass of mucus. This parasite resembled in size and general appearance the common trichina spiralis straightened out. At that time I had not heard of the discovery of Dr. Lewis, and did not therefore examine the patient's blood.

Shortly afterward, however, the second case came under my care. The patient was a middle-aged man, and had suffered for many years from chyluria, though, as in the first case, his general health was not much impaired.

Careful examination of this patient's blood revealed no sign of the parasite.

These cases were both successfully treated by turpentine, given in twenty-drop doses three times a day.

TUBAL DROPSY.

Dr. Abbe presented a specimen of tubal dropsy. The woman from whom it was removed died shortly after admission into the Roosevelt Hospital, and as the result of injuries received at the hands of her husband. The right Fallopian tube was distended to a size somewhat larger than a coil of small intestine, while the left Fallopian tube was somewhat smaller. The fimbriated extremities of each tube were matted to their respective ovaries and were stenosed. The uterus was bound down by pelvic cellulitis.

GANGRENE OF LEG AND FOOT.

Dr. Post presented a specimen of mortification of the leg and foot removed by amputation. The patient was a large, stout man, aged fifty years. In the early part of February he was attacked with pain and swelling in the right leg, for which he was sent to the Presbyterian Hospital, entering the medical side of the house, in the service of Dr. Jas. L. Banks. On examining the limb, Dr. Banks discovered entire obstruction to its circulation. The patient was accordingly transferred to the surgical side and came under the care of Dr. Post. In the course of a few days the foot and leg became livid gangrene within a few inches of the knee. As soon as a line of demarkation had appeared at that point, amputation of the thigh was decided upon and performed. The operation was done that afternoon by the double lateral flap method. The femoral artery was found completly occulated by a firm, fibrinous plug. Only one small muscular arterial twig required ligature. In consequence of the density of the tissues a section of the bone could not be made as high at first as was desirable. At the point of section the medulla seemed to be diseased, and after some difficulty the bone was removed higher up through a healthy portion.

The cause of the plugging of the artery was not known. In the absence of any history of syphilis and of the existence of cardiac disease, it was thought that arteritis had occurred. The vessel was occluded from the groin downward.

Dr. Post presented the arteries of the lower extremity taken from a female patient, aged eighty years, who died of senile gangrene. She was admitted to the hospital several months ago in consequence of an injury to her thigh. The vessels exhibited were in an advanced stage of calcification.

EROSION OF CARTILAGES OF KNEE-JOINT—AMPUTATION OF THIGH

Dr. Post presented a third specimen, which consisted of a leg removed by amputation, from a boy aged nineteen years. Four or five months ago he came into the Presbyterian Hospital on account of an abscess of the thorax, below the axilla. When Dr. Post came on duty he found that the abscess had not healed, and that there were still slight traces of pleuritic effusion in the lower part of the chest. The main trouble, however, was a swollen and painful condition of the knee. The latter was bent at a somewhat acute angle, and it could not be moved without occasioning great agony. The patient was feeble and emaciated, and the presence of the disease in his knee-joint seemed to be an extra burden, which he seemed incapable of bearing. Amputation of the thigh was decided upon as the only means of giving him a chance for his life. Contrary to expectation, the patient bore the operation quite well. At the end of a week afterward his temperature was much lower than formerly, and the patient was free from pain.

The lesion of the joint was mainly in the erosion of the cartilages. The latter appeared as if made by a gouge. The epiphysis, which was not yet consolidated with this shaft, presented a small cavity near one of its edges, around which the bone was slightly softened, and which contained a little pus. That was the only disease detected in the interior of the bone. The bone of the extremity was light and porous. but did not present any marked disease. The disease which commenced in the articular cartilages was one of the rare forms, and was as usual extremely painful. In the substance of the thigh were several elongated abscesses which necessitated the use of drainage-tubes in dressing the stump.

Dr. Stimson thought there were some reasons for supposing that the plugging in the case of gangrene of the leg commenced in the veins. The inner coats of the femoral vein were softened and changed, the calf of the leg was infiltrated with partially decomposed blood, and before discoloration appeared there was œdema of the limb.

Dr. Briddon did not see how it was possible to have such an occlusion of the artery, and so high up, due to primary plugging of the veins.

Dr. A. E. M. Purdy presented a specimen of what appeared to be fibrinous casts of the bronchial tubes. It was expectorated by a calf.

The specimen was, on motion, referred to Dr. Liautard for a report.

STRANGULATED FEMORAL HERNIA.

Dr. Stimson presented a specimen of strangulated hernia, removed post-mortem from a woman aged forty-three years. She began to vomit on Thursday and continued to do so at varying intervals until Saturday, when a physician was called. Strangulated femoral hernia of left side was discovered, but no attempt was made at taxis. She was taken suddenly worse yesterday afternoon, and died at eight o'clock in the evening. At post-mortem examination the hernia was found to be nothing more than a mere knuckle of intestine.

MULTIPLE ABSCESS OF BLADDER.

Dr. Stimson also presented a specimen of multiple abscess of the bladder, removed from a man aged twenty-five years, who, after a prolonged spree, was seized with retention. After a dribbling for forty-eight hours he entered the hospital and died in about three hours. At the autopsy several interstitial abscesses of the bladder were seen, in some of which there was perforation. The latter condition was supposed, however, to be post-mortem. There were well-marked pyelitis on left side and a double ureter on right side. The right kidney was free from disease, due probably to the fact that on account of the two ureters there was left no obstacle to the urinary flow.

West Chicago Medical Society.

Regular Meeting, March 24, 1879.

TRAUMATIC INSANITY.

DR. D. R. BROWER read a paper on this subject and reported three cases. The first case was that of an army officer, who, before injury, was noted for his kindliness of disposition, temperance and affection for his friends and family. He received an injury of the head, a scalp wound, with possibly a slight injury to the skull, from which he apparently recovered. Afterward, his emotional disposition began to change; he would have cephalagia, at times very severely, and soon got to taking liquor to intoxication at these times. At such times he was suspicious, vindictive, and brutal, and would beat his wife and children. These attacks were fits of mania. They continued at intervals as long as the case was kept track of. The second case was that of J. K., lately tried in a local court for murder. He was an Irishman of middle age. Had been educated by a brother who was a priest of the Catholic Church, to which the patient was devotedly attached. He was naturally kind and peaceful. He received while in the army, a head wound, involving the skull in a depression. Some months afterward he began to be suspicious of those about him at times; to have severe attacks of cephalalgia. Finally he would have attacks of *petit mal*, and the reporter thought there was, from the evidence, no doubt he had had two fits of *grand mal*. He had become estranged from most of his old friends; repeatedly left situations for the sole reason that he thought his employers and comrades were "down on him;" had acquired a mortal enmity toward the Catholic Church and the members of its orders. In his attacks of cephalalgia he was often thought dangerous by those about him, who kept out of his way. He had camphor about him constantly to keep evil spirits away. He woke out of a sleep one night and shot his wife who was beside him, and then shot himself. The wife died. He, recovering, was tried for murder. The verdict was that the prisoner was guilty of murder, but that at the time of the trial he was insane. Shortly afterward he cut his throat in his cell and died.

The third case was of a man also tried in the local courts for the murder of his wife, but who, at the time, and at the time of the murder, was so unmistakably insane that nobody doubted it, and he was sent to the asylum. In this case the insanity was clearly traceable to an injury of the head, received years before, and which was followed slowly by, first, headache, then inattention to business, then by other more positive symptoms of insanity.

Dr. Brower thought these cases illustrated the chronicity and slow development of insanity from traumatic injuries to the head; the comparatively slight injury required often to cause insanity; the fact that cephalalgia is the first symptom, which is followed by emotional disturbance, which latter always precedes intellectual aberration, and finally the general absence of anything like acute meningitis. He believed that in many such cases there was chronic meningitis. The teaching of cases like those described was, that no injury to the head was so slight as not to be important. At the same time it was true, hardly any injury to the head was so severe as to be despaired of.

Dr. E. L. Holmes related the history of a case of a naval officer, who had received a wound of the head from a shell. Recovering from the injury, as was supposed, he not long afterward began to be emotionally changed; was unreliable, soon became dissolute in his habits—a thing unknown before his injury—and was quarrelsome. He was finally dismissed the service for drunkenness. On returning home, he was found to have symptoms of intoxication when he had not partaken of liquor, and was secretive as to his history while in the service. On his death, an autopsy revealed an abscess of the brain, just beneath the seat of injury in the skull.

Dr. H. M. Lyman related the history of several cases very similar to those reported by Dr. Brower. In one case there was a scalp wound over the left eye, made by a blow from a tin dipper. This healed. In three months convulsions occurred, and the wound reopened; hemiplegia took place. A post-mortem examination discovered an abscess of the left frontal lobe. In another case—that of a man in jail for some crime—there was found a considerable depression of the left parietal bone beneath a cicatrix. The man was dumb, he thought from aphasia, as he was able to make with a pencil, when asked the cause of his injury, a hieroglyphic, evidently meant to represent the word glass, which Dr. L. took to mean that the injury had been inflicted by a blow with a beer-mug. The man was moody, and fancied he was followed by some one. He was clearly insane.

Dr. A. B. Strong described the case of a lad who had received a kick from a horse upon the left side of the head, just above and a little in front of the ear. The scalp was cut, but he thought the bone was not fractured. Insensibility was at first produced, which disappeared rapidly. In four days there appeared suddenly paralysis of the left side of the face and the right arm, and aphasia. No other paralysis was present.

A slow recovery from the paralysis followed. The aphasia improved so far that, in a few weeks, the boy could talk well when free from excitement, but, on any perturbation of spirit, or an attempt to talk rapidly, he was dumb.

PERIODICAL MANIA.

Dr. J. H. Salisbury read the history of a case of this character that recovered while taking antiperiodic doses of quinine. The patient was a man of twenty-five, a teamster, temperate, and healthy previous to the present illness. It was reported that two weeks before admission to hospital he had fallen from his wagon, and was injured to the extent of scratches about the head. That night he had vomited. He was sane six days, although not well. On the seventh day he had a chill, followed by fever, and an attack of delirious mania. This subsided, to be repeated in two days. When brought to the hospital he was in a state of wild delirium, and had to have a strait-jacket. On admission his temperature was only 100° F., and the pupils were slightly dilated and alike. Bromide of potassium and chloral were given to quiet him, and he slept. Next morning he was quiet, but not entirely rational. He had no symptoms of acute meningitis afterward, but had several slighter attacks of maniacal delirium, occurring with no particular regularity. He was given five to ten grains of quinine each day. In a few days he had entirely recovered.

Dr. A. B. Strong exhibited a specimen of spinal column, illustrating the process of cure of Pott's disease by anchylosis.

Another specimen was described, which had been found in the dissecting-room of Rush College, in which there was complete bony anchylosis of the whole spinal column, of the attachments of the ribs to the vertebræ, and of the ribs to the sternum. No motion was possible, except perhaps a slight antero-posterior one of the upper two or three cervical vertebræ. The head could only be moved with a slight bowing motion. There was no deformity anywhere. Respiration must have been wholly diaphragmatic. There was no appearance about the body that indicated ill-health or lack of vigor. The individual was a male, and past the meridian of life.

Remarks on Jaborandi.

Although jaborandi was introduced to the notice of the profession in the year 1865, it is only within a comparatively recent period that its physiological effects and therapeutic uses have attracted attention.

During the last year, with a view to ascertaining more exactly the pathological conditions in which it might be useful, I have given it to a considerable number of individuals, both in health and disease, and have taken it in my own person in varying quantities.

The first effect noticeable after the administration of a full dose—50–60 grs. in infusion, or 40–50 m. of the fluid extract—is flushing of the face; this is followed in a very short time by an increase in the salivary secretion and profuse perspiration; these appearing in from ten to twenty minutes after taking it.

The pulse is usually somewhat accelerated; the temperature rises slightly at first, but soon falls to the normal, or below. Nausea occasionally occurs; but this has never happened to the cases in which I administered it, when the precaution was observed of expectorating the saliva secreted instead of swallowing it. In ordinary doses it produces little or no depression. In large doses, however, there are produced some prostration, exaggeration of all the effects previously mentioned, evident increase in the bronchial, nasal, and lachrymal secretions, and disturbance of vision.

Given to animals in excessively large doses, it causes, in addition to the effect upon the skin, mucous membranes, and salivary glands, great prostration, with staggering gait, convulsions, and death; intense congestion of the brain, spinal cord, lungs, and abdominal viscera being found on post-mortem examination.

Occasionally, when it fails to produce its usual effect upon the skin and salivary glands, it causes an increase in the flow of urine; under the same circumstances diarrhœa may be produced.

Given in a case of suppression of urine, accompanied by uræmic phenomena, following an attack of scarlatina, it produced little or no effect upon the skin or salivary glands, but notably augmented the flow of urine, the quantity being increased from f. ℥ viij. in twenty-four hours, to Oiij. in the same period of time. This effect upon the kidneys, although not the rule, is by no means an infrequent one in scarlatina. Prof. Demme (of Berne) has reported a similar result.*

An alkaloid has been obtained from jaborandi to which the name pilocarpine has been given. This alkaloid is the active principle, all the effects of jaborandi following its administration.

Upon one occasion I took of nitrate of pilocarpine one grain, by the mouth. In fifteen minutes from the time of taking, there was flushing of the face with suffusion of the eyes; this was soon followed by a flow of mucus from the nostrils, resembling very much that from an ordinary coryza, increase in the salivary secretion and profuse perspiration; these effects continued to increase for an hour, when they reached their height; dimness of vision now occurred which lasted for half an hour; perspiration literally streamed from every pore; the saliva constantly filled my mouth; the quantity expectorated in three to four hours, by subsequent measurement, was f. ℥ xvi. The temperature, which in the first half hour had risen a degree, fell to the normal; the pulse was full and rapid, but became less so at the end of an hour. The effects of the drug continued from four to five hours, when they gradually disappeared, leaving no ill-effect behind. [The quantity of pilocarpine taken was excessive, $\frac{1}{4}$–$\frac{1}{3}$ gr. being the ordinary dose.]

A solution of pilocarpine applied to the conjunctiva produces contraction of the pupil, but I have never observed this result follow its administration by the mouth or hypodermically.

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*Med. Exam., July 18, 1878.

In the female, jaborandi produces an increase in the lacteal secretion, acting as a true galactagogue. Muller (of Berne) and Saenger (of Leipsic) state that pilocarpine stimulates the uterus to contraction when a tendency to expulsion already exists.

A marked antagonism exists between jaborandi and belladonna, all effects of the former quickly disappearing upon the administration of full doses of the latter, and Ringer has reported two cases of belladonna-poisoning, in which hypodermic injections of pilocarpine were followed by complete recovery.

In consequence of its diaphoretic properties, jaborandi is a useful addition to fever mixtures, and in the first stage of bronchitis may be substituted for opium; but its therapeutic value is most evident in its effect upon dropsical effusions. It causes the effusions of pleurisy and pericarditis to rapidly disappear, but does not prevent their reproduction.

Prof. Pepper has reported a case of pericarditis with effusion, in which he derived marked benefit from its use.

It may be given with great advantage in acute Bright's disease accompaning scarlatina, in which there is suppression of urine and uræmic symptoms, or to relieve the anasarca which is a so frequent sequel of this affection.

In chronic Bright's disease it rapidly moves the œdema, but I have never found it to diminish the quantity of albumen in the urine, although such result has been reported. In patients suffering with diabetes insipidus it lessens the flow of urine, but does not exert a curative influence, the quantity of urine again increasing upon the suspension of the drug. Dr. Langlet (of Rheims) reports that he has successfully treated the albuminuria of pregnancy with this remedy, and Stroynowski gave hypodermic injections of pilocarpine in puerperal eclampsia, no convulsions occurring after the first injection. In view of its action upon the uterus, it may be advantageously given during labor, and from its effect upon the mammary glands it is indicated in partial or complete suppression of the lacteal secretion.

The best form for administration is the alkaloid pilocarpine, in doses of ¼–⅓ gr.; from the smallness of dose and its complete solubility in water it is well suited for hypodermic use.

Children bear proportionally larger doses than adults, and its effects do not seem to be as certainly produced in them.—*M. B. Hartzell, M. D.*

Tendon-Reflex.

In the *Archiv f. Psychiatrie*, Bd. V., 1875, Erb and Westphal described, independently of one another, a peculiar symptom which had hitherto passed unnoticed, and which has since, under the term tendon-reflex, become the subject of considerable discusion. If the ligamentum patellæ be rendered tense by flexing the knee at a right angle (the thigh being supported by crossing it over the other limb), and the tendon be then smartly tapped with the finger or with a percussion-hammer, an involuntary muscular spasm will be produced in the quadriceps extensor femoris. This contraction may be so powerful as to cause a vigorous propulsive movement of the leg, and even of the entire limb. This phenomenon has been observed in various cerebral and spinal diseases, such as epilepsy, hemorrhage, embolism, tumor of the brain, cerebra-spinal sclerosis, myelitis, hematomyelie, lateral spinal sclerosis, etc. With exceedingly few exceptions, it has been found absent in locomotor ataxia, even in the initial stage, before the symptoms proper of ataxia have become developed. It is also usually, though not invariably, present, to a certain extent, in healthy individuals. Analogous symptoms may be produced upon almost all of the other tendons of the body, but, with the exception of the ankle or foot clonus (due to stimulation of the tendo Achillis), they are not so well marked as when the ligamentum patellæ is experimented upon.

The question at once arises with regard to the causation of this symptom, "Is it merely local and due to mechanical irritation of the parts, or is it a reflex act?" In the first article which he devoted to this subject, Westphal came to the conclusion that it was due to direct irritation of and increase of tension in the ligamentum patellæ and to the secondary increase of tension in the muscular fibers of the quadriceps, which are all inserted into the upper part of the tendon. There is no doubt that the symptom is due to irritation of the tendon itself, and not of the overlying skin. If the integument covering the ligamentum patellæ be pinched or otherwise irritated, or if the skin be drawn away from the tendon and then percussed, similar phenomena will not be produced. Percussion of the patellæ is also attended with negative results. These facts do not, however, prove that the phenomenon is not reflex, but merely that it is not an ordinary cutaneous reflex.

Schulze and Fuerbringer, in the course of their investigations on this question, observed that, in the rabbit, section of the crural nerve (which innervates the quadriceps extensor) will cause a disappearance of the phenomenon, and they therefore concluded that the symptom was a reflex. But Westphal demonstrated that the section of the nerve produced relaxation of the muscular fibers, and that the condition necessary for the production of the phenomenon (increased tension of the muscle) was thus abolished.

In the latter part of the year 1878, Tschirjew made an exhaustive review of the entire subject, and thereby arrived at certain definite and indisputable conclusions.

In order to determine whether the abolition of the symptom, after section of the crural nerve, was really due to the relaxation of the muscle, he adopted the ingenious expedient of gently stimulating the peripheral portion of the cut nerve with the electrical current in order to restore the previous tension, and then attempted to produce the phenomenon in the usual manner. This attempt was always followed by negative results.

Furthermore, if the "knee-phenomenon" is due to mechanical irritation of the muscular fibers which are inserted into the ligamentum patellæ, the wave of muscular contraction should pass from below upward. Tschirjew's experiments with a registering apparatus have shown conclusively that the muscular wave, which occurs during the production of the "knee-phenomenon," assumes no particular direction, a fact which we would naturally expect if the muscular stimulus has passed through the nerves.

Finally, experiments with the myograph proved that the time which elapses between striking the tendon and the resulting muscular contraction is too great for the mere propagation of the irritation from the tendon to the insertion of the muscle. The latter experiments were also confirmed by the recent investigations of Gower (reported in January of this year, before the Royal Medical and Chirurgical Society), who found that the interval between the tap upon the tendon and the contraction of the quadriceps, varied from .09–.15 of a second, a period which corresponds to the time necessary for the performance of a reflex action (conduction .045 second, latent stimulation .01 second, reflex process in the cord .05 second).

We can therefore no longer doubt that the phenomenon in question is really a tendon-reflex, and that its production is due to increased reflex excitability of the spinal nervous centers.

According to Trchirjew, the tendon-reflex has important bearings upon the vexed question of muscular tonus. As is well known, the existence of such a condition has been recently questioned by various physiologists, and even those who admit its existence have offered no satisfactory explanation thereof. Tschirjew thinks that muscular tonus is very probably a tendon-reflex, induced by the tension to which the various tendons throughout the body are subjected, partly on account of the anatomical relations of the insertions of the muscles, and partly on account of the varying position of the levers which are connected with the ends of the muscles (the bones).

The clinical relations of the tendon-reflex in question are not, by any means, so well understood as its physiological bearings. It is, however, pretty well established that the "knee-phenomenon" is abolished at an extremely early stage of locomotor ataxia, when the only symptoms in the case consist, perhaps, of an affection of certain of the cranial nerves, and the characteristic lightning-like pains in the legs. In rare cases this symptom has been found present in ataxia, but in these instances sensation was little or not at all affected, and the shooting pains in the limbs were likewise absent.

We must, therefore, regard the knee-reflex as a very valuable sign in differentiating the early, incipient stage of locomotor ataxia from the beginning of other obscure cerebral or spinal diseases. In this way, the symptom has an important bearing on the prognosis of ataxia, since our only chance of causing a favorable termination of this terrible disease lies in our ability to make a positive diagnosis before the ataxic symptoms proper have developed.

It is probable that continued observation upon the occurrence of knee reflex will furnish us with additional important guides with regard to the diagnosis and prognosis of other nervous affections.—*Med. Record.*

MICROSCOPY.

Microscopical Society of San Francisco.

THE subject of adopting a proposed unit in Micrometric Measurement, in accordance with the suggestions of the late Microscopical Congress at Indianapolis, was brought up for discussion, and a letter from R. H. Ward and A. W. Bower, the Committee of the Troy Scientific Association, giving their views on the matter and submitting certain propositions, was read and discussed. On motion, it was resolved that a vote of the Society be taken on the first proposition, namely: "Is it expedient at present to adopt a standard for micrometry?" and on such a vote, it was resolved in the affirmative.

It was then, on motion, resolved that the metric system should be employed for that purpose.

Dr. Gustaf Eisen, who has for some time past investigated the class of molluscs called Pteropoda, exhibited some admirably executed drawings of two species most generally met with near the shores of Southern California. The drawings showed the animals in natural size and colors, and also several anatomical details of their nervous, generative and gastric systems.

The class of *Pteropoda* had hitherto been divided in two orders, viz: *Thecosomata* and *Gymnosomata*, the animals belonging to the former being covered by a hard shell, those of the latter being perfectly naked. The Doctor thought a better characteristic would be the presence or absence of a silicate radula in the palate. The two genera exhibited were very likely new, but seemingly related to *Tiedemannia* and *Pneumodermon.*

The wings of the former genus were drawn more minutely, and especially their anterior margin was seen in a highly magnified scale. The Doctor had here found some new organs of sense, consisting of an agglomeration of larger cells situated on a pear-shaped body of minute granulated cells. In the middle of the larger cells was was to be seen a small opaque, pearl-shaped body, immediately connected with a nerve ganglion. Such peculiar organs were distributed over only a small surface of the hyaline wing. The masticatory organs of this genus were situated in the stomach, and consisted chiefly of four pyramidal chitinous teeth. The same organ of *Pneumodermon* was seen to consist of a radula full of silicate teeth. On both sides of this radula, and also in front of the same, were large round, or triangular bodies, covered with chitinous teeth, between which the food apparently was ground before entering between the teeth of the more delicate radula.

The animals of both genera being hermaphrodites, their male and female generative organs were found to be connected in the same individual. In both genera they seem to resemble each other to some extent, but, as could be seen by the drawings, those of *Pneumodermon* were the most complicated, as having near to the exterior porus an additional large prostrata gland.

New York Microscopical Society.

Reported for Medical News, by Chas. S. Shultz, Secretary, Hoboken, N. J.

The annual election of the New York Microscopical Society was held on the evening of Jan. 3, 1879, Mr. Hyatt, the President, in the chair.

On motion, the President appointed as a Nominating Committee, Messrs. Hubbard, Wall and Yates. They made their report, when the voting for officers took place, which resulted as follows:

President—J. D. Hyatt.
Vice-President—A. A. Julien.
Recording Secretary—C. S. Shultz.
Corresponding Secretary—W. H. Mead.
Treasurer—W. C. Hubbard.
Librarian and Curator—J. Warnock.
Auditors—Messrs. G. I. Whitehead, J. L. Wall, A. J. Swan.

The annual meeting of the New York Microscopical

Society was held Jan. 17, 1879, President Hyatt in the chair.

The President made a favorable report on the state of the society. He stated there were thirty-two active, eight associate, and three honorary members.

The Treasurer made his report.

Messrs. Julien, Deems and Mead were appointed a committee to find suitable rooms for this year's meetings.

R. Hitchcock, Recording Secretary.

[Abstract by C. S. Shultz.]

The annual reception of the New York Microscopical Society was held informally in the Society's rooms, Feb. 7, 1879.

The President, Mr. Hyatt (who had been re-elected), in lieu of his valedictory, read an interesting paper on "The Tongue of the Honey Bee," stating in substance that he had determined the exact structure, by numerous thin sections, which, when examined by transmitted light, showed that enomologists had fallen into many errors respecting the true character of this organ.

The new officers took their seats, when Mr. Hitchcock exhibited one of the new large pattern stands made by Mr. Bulloch, of Chicago.

Donations of diatomaceous material were received with thanks, from Mons. E. Mauler, of Travers, Switzerland, through Messrs. Hitchcock and Wall.

There were present as visitors, Mr. Hanaman, Secretary of the Troy Scientific Association; also Messrs. Besson, Cooper and Rugge.

The meeting then adjourned to view the numerous interesting objects (both living and on slides) that were placed under the microscopes for exhibition.

The regular meeting of the New York Microscopical Society was held Feb. 21, 1879, President Hyatt in the chair.

There were received "Bulletin of Comparative Zoology," Cambridge; also fifty copies of the "Transactions" of this society, from Messrs. Hitchcock and Wall, for all of which the donors were tendered the thanks of the society.

Mr. R. Hitchcock read a short paper on "Some of the Lower Forms of Fresh Water Algæ. He referred more particularly to the Palmellacea. He stated, among other things, that, on account of the changeable form of these plants, much confusion had resulted. He gave the distinguishing character of the plants known as Protococcus, and several others, as they appeared to him. He exhibited under a microscope a specimen of Dictyosphaerium, which he had been watching for the past few months.

Mr. C. Van Brunt followed him on the "Preserving and Mounting of Algæ," etc., and in his experience had found that a cell made of asphalt and gold size, in which the algæ or other plant had been placed in carbolated water, and the cover sealed with hard balsam in benzole, covered with size, etc., that such mounting had been well preserved for eighteen years in his hands.

The regular meeting of the New York Microscopical Society was held March 7, 1879, Vice-President Julien in the chair.

The Committee on Excursions and Field Work reported their list of places to visit on alternate Saturdays during the summer, and, on motion, were empowered to print the lists and make all arrangements.

Mr. M. R. Cooper, of this city, was elected an active member.

Dr. R. H. Ward, President of the Troy Scientific Association, was present as a visitor, and invited the members to attend the next meeting, at Buffalo, of the American Association of Microscopists, of which he is the President.

The meeting adjourned to view some test objects under a Tolles 1–10th, and Woodward prism as a means of illumination, as shown by Mr. Hitchcock. Other interesting objects were exhibited by various members.

CHAS. S. SHULTZ, Recording Secretary.

DR. EPHRAIM CUTTER, of Boston, projected Beale's and Salisbury's (chiefly) hereditary taints before the Richmond Academy of Medicine at a special meeting March 3d, 1879. The results of work done with the best modern instruments of precision were shown so that all could see for themselves. Micro-photographs of syphilitic and consumptive blood, taken with Tolles' $\frac{1}{5}$, $\frac{1}{10}$, $\frac{1}{16}$, $\frac{1}{50}$, $\frac{1}{75}$ inch objectives, occupied undivided attention for about two hours. Yeast and algæ were demonstrated as examples of nocent and innocent parasitic vegetation. The spores of yeast found in the blood of consumptives, even one year before organic lung disease, were shown and approved as examples of the Salisbury doctrine, which is that a yeast in the blood is the cause of tuberculosis. As evidence, bread raised with the yeast in the fæcal diarrhœal dejections of third stage (after Salisbury) were shown. It was also stated that Dr. Salisbury had killed 104 animals by consumption, and artificially induced it by feeding with food saturated with yeast; and, further, that, by starving out the yeast from the blood, both Drs. Salisbury and Cutter had, in a large number of cases (over 1,000), convinced themselves that this is the nearest approach to the real nature of tuberculosis they knew of. A combined work is ready for the press by subscription ($5). A physical demonstration was shown of the power of the Salisbury plan to clear the blood and reduce the enlarged white blood corpuscles.

Dr. W. R. Weisiger, of Manchester, ably assisted Dr. Cutter in his demonstrations. Dr. Cutter tells us he is an honor to our State. The progress in micrology made by a "Virginia country doctor" in active practice and middle life, is very encouraging to those who would solace advancing years with the micsoscope, and creditable to Dr. Weisiger.—*Va. Med. Monthly.*

Spencer's Immersion—$\frac{1}{10}$ of 180° Angle.

SOME weeks ago Mr. Spencer made for us an immersion, $\frac{1}{10}$ of 180° angle. Having been sick much of the time since receiving it, we had not had opportunity of testing its capacity for resolving. Our friend, Gov. J. D. Cox, who takes much interest in microscopy, and the natural sciences generally, differing greatly in this respect from other leading statesmen, who are only interested in politics, happening lately to drop into our office, we handed the objective to him for an evening's trial. The note from him, which we append, tells what he did with it in a very brief trial:

"WEDNESDAY, A. M., *April* 16, 1879.

"DR. THACKER:

"*My Dear Sir*—It may interest you to know that my last evening's work with your Spencer's *tenth* was quite satisfactory.

"On a slide of *amphipleura pellucida*, from Bridge of

Allan, Scotland, in balsam (which Mr. Spencer gave me), the resolution of the striæ was unmistakably good. On this slide the shells are single (not whole brustules, with two valves, as in the specimen on my *probe platte*), and this made the work much easier. I used the Woodward prism and the glycerine immersion. I think I shall have no difficulty in repeating it when next we meet.

"Yours, very truly, "J. D. Cox."

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MICROSCOPE FOR SALE.—There is at the office of the MEDICAL NEWS, for sale, one of Schieck's, of Berlin, largest stands. It is of brass entire, very heavy, so as not to be easily jarred. It inclines at any angle; the body and stage revolve around a center, so that an object can be examined vertically or horizontally without changing it or altering the focus or illumination. Stage inlaid with glass. Smooth, coarse and fine, rack and pinion adjustment. The objectives are Schieck's best—one inch, two-third inch, one-third inch, and one sixth inch immersions. Bull's eye condenser, four eye-pieces, micrometer eyepiece, camera lucida, achromatic condenser, polarizing apparatus, etc.; solid Spanish mahogany case. Cost over $300, without duty. Can be bought for $200. Address Editor of MEDICAL NEWS.

GLEANINGS.

A NEW GYNÆCOLOGICAL OPERATING-TABLE.—Mr. Lewis Thompson, of Philadelphia, has lately constructed for Dr. William Goodell an operating-table based on that of Dr. M. D. Mann, of New York City, but presenting several valuable points of difference from the table invented by that gentleman.

Dr. Goodell's table is two feet and a half high at one end and two feet nine inches high at the other—its upper surface thus presenting an inclined plane (bringing the hips of the patient to a level above that of her head), four feet in length, and two and a half feet in width. By moving a crank at one side of the table, the "Sims' latero-ventral position" may be exaggerated, this side of the table being thus raised three inches above the level of the other side.

The two sides of the table forming the feet of these two inclined planes are protected by their upright strips of board, which prevent the patient from slipping off the top of the table. At one end of the table, which rolls on casters, is a drawer partitioned off so as to hold sponges, instruments, absorbent cotton, etc. A narrow strip of board, which is provided with a heel and which slides in and out of the body of the table beside the drawer, affords support for the ankle in the "Sims'" position.

Prof. Goodell has one of these tables at his office, and employs another at his clinic at the University Hospital.

A SUBSTITUTE FOR THE HORSE.—A number of country practitioners in England are employing bicycles or tricycles as means of locomotion, and the use of these vehicles is increasing considerably. They do not supply the place of a horse entirely, but they enable the physician to do away with an extra one. The bicycles are made of iron and steel, the rim of the wheel being covered with rubber. Upon them one can travel over tolerably rough and icy roads and up quite steep grades. On good ground the rate of speed is a mile in five minutes; racing speed being, however, much greater. The ordinary rate of travel is eight or ten miles an hour. Tricycles are also made, which are safer than the bicycles and nearly as fast. In these the rider sits between two wheels which he propels with a treading motion; a third and guiding wheel is placed in front. There are very likely many places in this country where this mode of locomotion could be used with advantage.

STRYCHNIA—ITS ANATOMICAL AND ITS PHYSIOLOGICAL EFFECTS UPON THE BRAIN, SPINAL CORD AND NERVES.—Dr. W. H. Klapp (*Journal of Nervous Diseases*, October, 1878) details at length some very elaborate experiments made upon the above topic. The care and skill exhibited lead us to the belief that his conclusions are approximately correct. They are: (1) Strychnia produces no appreciable primary lesion of nerve substance proper; that secondary lesions are produced—granular degeneration—by the engorgement of the vascular system, and that this is more marked in the brain and cord than in the nerves. (2) The convulsions of strychnia are not cerebral, and they are much more severe after the ablation of the cerebrum owing to the removal of Setschenow's ganglia. (3)

Strychnia does not affect either the sensory or motor nerves at their periphery. (4) Both sensory and motor nerves in their course are unaffected by strychnia. (5) The tetanus-producing power of strychnia has its only action in the gray matter of the spinal cord. (6) In small doses the primary action of strychnia is to excite the vaso-motor center, causing thus a rise in the arterial pressure, and secondarily to paralyze this center, and hence to supplement this rise by a fall. (7) In large doses the vaso-motor center is immediately paralyzed. (8) The slowing of the pulse produced by the exhibition of strychnia to both warm and cold-blooded animals is in neither case produced by any action on the central or peripheral ends of the pneumogastrics; but in warm-blooded animals is due to action on the excito-motor ganglia of the heart, and in cold-blooded animals is due to action on the ganglia situated in the sinus vonosus. (9) The main vaso-motor center for strychnia is situated in the medulla oblongata, but simpler centers exist in the spinal cord. (10) The pneumogastric nerves are *not* paralyzed by strychnia in either warm or cold-blooded animals. (11) Strychnia decreases the number of respiratory movements; at first from too little blood, and afterward from too much blood flowing to the respiratory centers. (12) The decrease is not due to any action of the pneumogastrics. (13) Artificial respiration always moderates and sometimes stops the spasms; and this power is due to a maintenance of the oxygenation of the blood until the poison can be eliminated, and is not due to a reflex stimulation of the pneumogastrics.—*Detroit Lancet.*

The Pathology and Treatment of Headache. By Dr. Day, Clinical Lecturer in the Samaritan Hospital, London, England.—Dr. Day, in a clinical lecture delivered at the Samaritan Hospital, considers the various forms of headache and their appropriate methods of treatment. Headache occurs in cases of anæmia, and in hyperæmia. In headache from cerebral anæmia the pain is referred to the top of the head, which often feels hot and burning; whilst in headache from hyperæmia the pain is frontal, throbbing and bursting. Dr. Day further distinguishes in headache common to both sexes a sympathetic variety, due to some eccentric cause of irritation; nervous headache caused by temporary derangement of the nervous centers, and neuralgic headache. Headache also arises from menorrhagia, and from the action of poisoned blood upon the nerve centers; organic headache is brought about by morbid changes within the skull. Headaches are of frequent occurrence in children, and, if persistent, are very significant, and should invite more serious attention than a similar disorder in the adult. As to the treatment of headache, Dr. Day advises as a preliminary step a diligent search after the cause of the disorder, which, when found, should be removed as speedily as possible. The remedies to be used are tonic or calmative, as the case may require. If the brain be over-excited, bromides of potassium and ammonium, chloral hydrate and morphia as a hypodermic injection or in other form, may be used. The morphia combined with an infinitesimal dose of atropia, and used with care, has been found to be an invaluable remedy, even in cases of organic disease. In nervous headaches a stimulating emetic of sulphate of zinc, mustard or ipecacuanha will act like magic, as will also a mustard leaf at the back of the neck, the feet and legs being at the same time put into hot water. In the neuralgic variety tonics are serviceable, especially cod-liver oil, phosphorus, quinine and arsenic. The local application of aconitina ointment is serviceable in that form known as brow ague. As a general treatment it is recommended to elevate the head at night, and to make use of hard pillow. In every case the first principle to inculcate is rest.—*Brit. Med. Jour.*

COPAIBA IN CIRRHOSIS AND JAUNDICE.—The value of copaiba as a diuretic and cholagogue is not sufficiently appreciated. The following case, reported in the *British Medical Journal*, by Dr. B. J. Massiah, illustrates it: W. D., aged 37, a clerk, was a spirit drinker for four years, seven years ago, and during the last four years and a half has had three prolonged and painful attacks of jaundice, with ascites and œdema of lower limbs. On admission, three months ago, he was tawny, thin, rather weak. He complained of constant pain in the umbilical and lumbar regions. His fluctuating abdomen measured thirty-four inches in circumference, and the vertical hepatic dullness in the nipple-line was three inches. The urine was scanty, bilious and exalbuminous.

During the first month he took bitartrate of potash and compound jalap powder; and the abdomen increased two inches, the urine remaining scanty. Then, under a scruple of copaiba thrice daily, it rose on successive days, from one pint in twenty-four hours to three, four and five pints; while the ascites began to subside. Once, for a fortnight, he took half a dram of tincture of belladonna thrice daily, for the abdominal pain, and the quantity of urine fell below two pints daily. Since then, he has returned to the copaiba, and his urine has averaged three or four pints daily. The abdomen now measures thirty-three inches in circumference, and his general health is much improved.—*Med. and Surg. Reporter.*

Treatment of Post-Partum Hemorrhage.—At a meeting of the American Gynecological Society, Dr. Penrose—in a paper on vinegar as a remedy in the treatment of post-partum hemorrhage—presented the following advantages:

1. It could be easily obtained.
2. It could be easily applied and instantly, without special apparatus.
3. It always cured the hemorrhage; or rather it had not failed in his practice.
4. It was sufficiently irritating to excite the most sluggish uterus to contraction, and yet not so irritating as to be subsequently injurious.
5. It was an admirable antiseptic.
6. It acted upon the lining membrane of the uterus as an astringent.

The remedy was applied as follows: Saturate a rag with vinegar; carry it into the cavity of the uterus, and squeeze it.

In the vast majority of cases, the hemorrhage ceased as if by magic when the vinegar passed over the surface of the uterus and vagina. It could be easily repeated, in case the first application failed.

Westphal's Diagnostic Point in Locomotor Ataxia.—Prof. Westphal about a year ago asserted that he had discovered a pathognomonic sign of sclerosis of the posterior columns. It is a very simple one. When in health, sitting with one knee across the other and the foot of the uppermost leg freely suspended, it is well known that a small tap with a narrow instrument, such as a ruler, delivered on the tendon of the quadriceps, just below the patella, will cause the foot and lower leg to spring up with a jerk. Well, Dr. Westphal maintained that this jerk does not occur in posterior sclerosis, and that its absence is a sure sign of the presence of that formidable disease.

His conclusions were attacked by several observers at the last meeting of the British Medical Association; and it seems pretty clear that his statement requires modification. No doubt the absence of this involuntary act is a significant sign of some important organic change. A new study of it has been made by Dr. S. Tschirjew in the *Archiv fur Psychiatrie*, and with great accuracy. The clinical result he reaches is that the absence of the reflex motion in man points to degeneration of the posterior spinal roots and columns at the level of the third and fourth roots of the crural plexus; but that in degeneration of the columns which does not reach so low as this the reflex phenomenon may appear. This very interesting result vindicates the symptom as of great importance. —*Med. Surg. Rep.*

THYMOL AND ITS USES.—As an antiseptic, thymal is much more powerful than phenol or cresol (carbolic acid). Ranke uses a solution of one part thymol to one thousand parts water, instead of the carbolic solution of Lister. Dr. B. Kussner, of Halle, has tried it internally. In doses of three to five drops of a one per cent. solution he found it useful in the diarrhœa of children. An inhalation of one part to one thousand of water reduced the fever and expectoration in a phthisical case.

Animals poisoned with thymol sink into a profound coma. After death their blood is dark and fluid. Fatty degeneration of internal organs is, however, not found. Injected into the veins it lowers the temperature and induces stupor.—*Med. Surg. Rep.*

CURARE IN EPILEPSY.—In the opinion of Kunze we possess in curare a remedy by means of which we may cure cases of epilepsy of long standing. He employs a solution of seven grains of curare in seventy-five minims of water, to which he adds two drops of hydrochloric acid. At intervals of about a week he injects beneath the skin eight drops of this solution, and in various cases in which convulsions had occurred for several years, he obtained a complete cure after eight or ten injections.—*Canada Med. Rec.*

BOOK NOTICES.

HEALTH, AND HOW TO PROMOTE IT.—By Richard McSherry, M. D., Professor in University of Maryland. 12mo. Pp. 185. New York: D. Appleton & Co. Cincinnati: R. Clarke & Co. Price, $1.25. 1879.

"Hygiene," as the author very truly says, "is a subject in which all mankind has an interest, even if it be, as it too often is, an unconscious interest. The life of every man, woman and child ought to be guided and governed by its laws. This being so, the subject ought to be presented and agitated in many forms, so that its importance shall be everywhere appreciated. Physicians and their patients are equally interested in it, for the success of physic will be vastly greater wherever hygiene is understood."

The present work is addressed to the general reader, and is, therefore, as free as such a work can be made from scientific technicalities. But while intended for popular use, the physician will find it highly instructive. We have long since observed that, from a knowledge of anatomy, physiology, pathology and treatment of disease, a knowledge of hygiene does not necessarily spring, but that the principles upon which it is founded must be studied by themselves. Our author has succeeded in elucidating these very satisfactorily, and we take pleasure in commending his work to our professional brethren for their study. There will be found discussed, at length, food, clothing, exercise or work, water, air, race, temperament, sewers, cesspools, inheritance, habit, condiments, various articles of diet, longevity, animal emanations, schools, temperance and intemperance, etc., etc., with very many other subjects beside these we have promiscuously jumbled together in enumerating.

THE PRINCIPLES AND PRACTICE OF GYNECOLOGY.—By Thomas Addis Emmet, M. D., Surgeon to the Woman's Hospital of the State of New York, etc. With 130 Illustrations. 8vo. Pp. 855. 1879. Philadelphia: H. C. Lea. Price, $6.

This is not a new edition of a work some time before the profession, but it is an entirely new work—a new candidate for favor.

Dr. Emmet has been for a long time known to the profession of the United States by his gynecological contributions to the medical journals, and is known to be thoroughly versed in the department of medicine which he has made a specialty—gynecology. In the Hospital for Women, with which he has been connected for the last twenty-five years, his experience in the treatment of diseases of females has been the greatest; and being an accurate and unprejudiced observer and endowed with logical powers of mind, it would be expected that a work by him would be one of very great merit. That the one before us is of that character, we think will be generally conceded.

The work is essentially a clinical digest. If we had the space we would like very much to go through the different chapters, and present our readers with an outline of his discussion of the various diseases of which he treats—the results of his observations in regard to the history and pathology of many of them, and his mode of treatment. We have no doubt such a review would be interesting and instructive. But we must forego it.

Although there are very many works upon gynecology at the present time, yet we feel very sure that all who take an interest in that department of medicine will be abundantly compensated in procuring this work and attentively studying it. The medical student, especially, will find it valuable as a text-book.

A MANUAL OF EXAMINATION OF THE EYES: A Course of Lectures delivered at the "Ecole Practitude." By Dr. E. Landolt, of the Ophthalmological Laboratory of the Sarbonne, Paris. Translated by Swan M. Burnett, M. D. Revised and enlarged by the Author. 8vo. Pp. 312. Philadelphia: D. G. Brinton, 115 South Seventh Street. Price, $3.00.

"This work, written by one of the most eminent of the younger European ophthalmologists, is a concise yet comprehensive description of the methods of examining the different parts and functions of the eye. While full enough for the specialist, it will enable the general practitioner to diagnose the condition of the organ, and determine whether the services of an oculist are needed or not."

In this work we find the philosophy of sight very completely explained. The mechanism of the eye, its movements, its actions as a lens, are all set forth so as to be easily understood by the student who has a knowledge of the principles of natural philosophy. It will, therefore, be perceived that the work is not made up merely of instructions in diagnosing diseases of the eye, as one might suppose from the title page. Students and practitioners will find it of great aid to them.

CHEMISTRY: GENERAL, MEDICAL, AND PHARMACEUTICAL. Including the Chemistry of the United States Pharmacopæia. A Manual of General Principles of the Science, and their Applications in Medicine and Pharmacy. By John Attfield, M. A., Ph. D., of the University of Tubingen; Professor of Chemistry to the Pharmaceutical Society of Great Britain, etc., etc. Eighth Edition. Revised by the Author. 12mo. Pp. 697. 1879. Philadelphia: H. C. Lea. Cincinnati: R. Clarke & Co. Price, $3.00.

This very popular and meritorious work has now reached its eighth edition, which fact speaks in the highest terms in commendation of its excellence. It has now become the principal text-book of chemistry in all the medical colleges in the United States. The *Chemical News*, in speaking of it, says: "For all the numerous class of students who are preparing for the medical or pharmaceutical profession, we know of no work in the language which can be compared with the one before us."

The present edition contains such alterations and additions as seemed necessary for the demonstration of the latest developments of chemical principles, and the latest applications of chemistry to pharmacy. It is scarcely necessary for us to say that it exhibits chemistry in its present advanced state.

ATLAS OF SKIN DISEASES. By Louis A. Duhring, M. D., Professor in the Hospital of the University of Pennsylvania. Part V. Philadelphia: J. B. Lippincott & Co. Cincinnati: R. Clarke & Co.

In the September issue, 1878, of the MEDICAL NEWS, we gave quite a full description of this Atlas. It consists of very finely colored plates, after life, of the various skin affections. After each plate follows a description of the disease which it represents. The price of the Parts, royal quarto in size, are $2.50.

In Part V. are represented scabies, herpes zoster, tinea sycosis, eczema (vesiculosum). There will be from eight to ten Parts, appearing from four to five months apart. It has been denominated "the most valuable work of the kind ever published."

HEALTH PRIMERS, NOS. 1, 2, 3, 4. New York: D. Appleton & Co. Cincinnati: R. Clarke & Co. 18mo. 40 cents each.

Each number forms a little work by itself, devoted to some subject of hygiene. In the series of the four before us, No. 1 is devoted to "Exercise and Training;" No. 2 to "Alcohol;" No. 3 to "The House;" No. 4 to "Premature Death: Its Promotion or Prevention."

These *Primers* will be found to contain a large amount of valuable information upon the subjects of which they treat. They are small—averaging about ninety-five pages each—yet they are *multum in parvo.* The one on "The House" should be studied by every one contemplating building a home. The one on "Alcohol" is worth the price of all of them. It treats very fully the use and abuse of alcohol. The ones devoted to "Premature Death" and "Exercise and Training" are no less valuable than the others.

EDITORIAL.

DECEASE OF PROF. DANIEL VAUGHN.—This remarkable man passed away April 6th—dying at the Good Samaritan Hospital of this city. Though it was known to his friends that he had been very seriously ill, his death was not expected; for after his removal to the hospital he had, under the tender care received there, according to appearances, very rapidly improved. He died without a struggle or any evidence of suffering. He was fifty-eight years of age.

We had the honor of being a colleague, in one of the medical schools of Cincinnati, of this eminently learned man, but who, with all his learning in literature and science, had not sufficient financial ability to feed and clothe himself, and often went through the streets suffer- the gnawings of hunger and shivering with cold from insufficiency of clothing. Poor Simon Ockley, the eminent Oriental scholar and historian, who wrote the History of the Saracens, and of whose great learning and abilities Gibbon, in his "Decline and Fall of the Roman Empire," speaks in the highest terms, suffered greatly with poverty and underwent imprisonment in Cambridge Castle for debt, yet he was well to do in comparison with poor Vaughn. Ockley had a friend and patron part of his life in the Earl of Oxford, and, besides, would find occasionally other friends and helpers, but Prof. Vaughn had at no time friends or helpers, unless now and then, after going several days without a morsel of food, some one would slip into his hand a dollar or two with which to appease his hunger and satisfy an urgent want or so. We recollect at one time of his disappearing, and being gone so long a time that all his colleagues had but little doubt of his being drowned in the Ohio River—returning, however, unexpectedly, he presented himself at the office of one of his colleagues in a most ragged condition, and stated that he had not tasted food for three days, which was undoubtedly true. His colleague gave him a couple of dollars with which to purchase something to eat for the time being. A meeting of the faculty was then called together, and a committee of one appointed to take him to a merchant-tailoring establishment and purchase him a respectable suit of clothing throughout; to secure for him a good, comfortable boarding place for the fall and winter months, and arrange that the bills for the same should be brought to the treasurer and paid by him directly, and to do whatever else might be necessary for his welfare. Money in itself having no value whatever in his eyes, his present wants being supplied, he was altogether careless of what became of any surplus he might accidentally have, and would part with it as easily as would a little child. He was often engaged in inventions; and if he needed any apparatus, it mattered but little to him whether one dollar or five dollars was charged for it, if he had the amount, it would be paid without a thought as regards from where to-morrow's meal was to come.

The Hon. W. M. Corry, of this city, as much of a friend of poor Prof. Vaughn as he would permit any one to be, has written a brief sketch of him for the *Commercial*. Although we will be devoting an unusual amount of space in an obituary notice by publishing it, yet, so interteresting is the history of this really strange and very learned man, we feel sure our readers will not blame us for occupying several pages in his biography. We will take the liberty to shorten Mr. Corry's sketch by omitting a sentence here and there:

"With all his stores of knowledge, and his insight into laws and systems, and his familiarity with the grand rhythm of the universe; with his capacity and readiness to teach made known to the residents and institutions of this great city, the proceeds of his lessons and lectures were too meager to buy him bread and shelter. He lived apart and alone, not seeking to discuss the ordinary topics, nor waste his time and lower his standard of thought to the capacity of what is called society, and society has effectually resented his indifference. For twenty-five years privation in every form has been the lot of Prof. Vaughn in Cincinnati. From the time when, a quarter of a century ago, the libraries and learned organizations, literary and scientific, of the city, first attracted him to it, till his dying day, he has never been able to suffice for the most ordinary wants. He had neither taste nor faculty for acquisition, for his whole soul and all its powers were absorbed in the pursuits of philosophy, in her highest and most hidden recesses. His own body was entirely overlooked, and suffered accordingly. It had to freeze and starve, and totter with weakness, because the Professor was wholly absorbed in books and the labor of thinking and writing, and the pursuit of the most profound and remote speculations. None ever accused or suspected him of any vice or even indulgence; he was neither indolent, aimless, nor dissipated, but he ought to have made himself comfortable. If he failed to do it, it was the duty of his fellow-citizens, who could appreciate his scientific value, to have secured him a decent living. He was a foreigner, who had selected Cincinnati for his residence, and he was anxious that her fame should go out to the world, and to furnish his share of the materials to make her known as a scientific center. Indeed, he has done it. He had no sooner qualified himself to claim the attention of the leaders of thought throughout the earth than he put himself in communication with them. He wrote one or two volumes upon mathematics and astronomy, which were his special studies, but his favorite mode of publication was by correspondence with scientific periodicals, in whose columns at home and abroad he was a welcome guest. Especially with the Journal of the British Association for the Advancement of Science, during the time when Sir David Brewster and Sir Robert Murchison were editors, his frequent papers appeared on the first page in the first column. We believe that his poverty alone compelled him to forego the pleasure of writing for the Journal, which appears, we believe, simultaneously at London and Edinburgh, since it has been conducted by its present editor, Sir Wm. Thompson. Mr. Vaughn's papers were translated into French and German, and he was corresponding with a distinguished French *savant* upon his astronomical theories and discoveries till lately. In short, Prof. Vaughn stands among the foremost astronomers and the boldest thinkers of this or any other country. All these arduous labors were perperformed without any compensation whatever. It may be said in this connection that he has recently been paid to his satisfaction for several essays over his name in the *Popular Science Monthly*. A most pathetic incident of the last one is, that the very day before his death, he sat upon his bed and corrected the proofs, which ought to have been done for him, but which he would never ask any one to do, and which, if it did not cost him his life, without doubt shortened his few remaining hours. He tried to eke out a living by giving private lessons in mathematics and astronomy, and also in the languages. Of these he was master of his own and German, French, Italian, ancient add modern Greek, Latin, Spanish, and Italian. The students were few, and the lessons poorly paid, although he was faithful, and lost much valuable time, owing to the inattention and negligence of pupils.

"For years some kind woman, whose name we are sorry not to know, boarded and lodged Prof. Vaughn, and gave him more sympathy than he got from all the rest of the town, and more also of substantial support. He was always sure of a pleasant reception at her humble home, and was not required to be punctual in his settlements. The boarding-house was broken up a year or two ago, and our poor friend was the worst sufferer. He took a room which was cheap, but every way cheerless, inaccessible and uncomfortable. A chair and a bedstead, with a pile of rags, a worn-out stove, and an old coffee-pot, with a few musty shelves of books, covered with soot, were all his furniture. He lived, sick and feeble and old, from hand to mouth, often unable to go abroad for food, and as badly off for helping himself indoors. It were bad to have any human being so utterly abandoned, and so suffering. Here and there, at wide intervals, there was a man or woman who would have done much to modify this misery, but it ought never to have been left to those who could scarcely afford to curtail their own allowance of plain clothes and victuals for another. This long and terrible winter has been almost of itself a death warrant to this drooping and destitute man. There was an obstacle to good offices in himself which must be admitted. He would not give his address to his friends, nor permit them to ferret him out and ascertain with their own eyes his actual condition. Nor would he make any explanation, much less ask or accept any pecuniary assistance. But how admirable does this firm and indomitable spirit appear in contrast to average humanity. It was the solid basis of his lofty character, which never yielded an opinion, disguised a conviction, nor allowed interference with any essential matter, or indeed in non-essentials. Prof. Vaughn's scientific forms and most extraordinary attainments lifted the city so high above her natural plane that he was most truly public property. He was the only man among the hundreds of thousands of our people whose name will survive the next century. The European scientists and philosophers knew Daniel Vaughn's place of residence to be Cincinnati, and inquired after him with the greatest interest whenever a stranger among them mentioned his name. 'Prof. Vaughn lives at Cincinnati. We are great admirers of his scientific labors, and would be delighted to greet him here. He is worthy of a high place among modern or ancient philosophers and scholars.' It is recorded that such remarks were a complete surprise to the Cincinnatians who heard them, and that the first time in their lives they heard of Prof. Vaughn at London, several thousand miles from home. There can be no doubt that the city has incurred a deep and lasting reproach by permitting such a treasure to be destroyed prematurely by disease and actual want, and that she should be told of it, and should suffer the consequences. This is called the Paris of America; it boasts of its Fountain, its great University and Observatory, its Music Hall, its Expositions of Art, its Fire Department, its grand hotels and opera-houses, its wealth, respectability, learning and learned professions, and yet—O shame, where is thy blush?—it has seen its greatest genius and most famous citizen reduced to rags and starvation.

"Lest the reader may think that either Prof. Vaughn's merits are strained, or the city's demerits aggravated, we would have him look at our imperfect catalogue of the wonderful range and profundity of subjects, which he was constantly presenting in all the force of most choice English composition.

'He treated with the greatest originality such topics as the following: 'The Doctrine of Gravitation,' 'The Cause and Effects of the Tides,' 'The Rings of Saturn' (that *Pons asinorum* of astronomy), 'The Light and Heat of the Sun,' 'The Origin and the End of the World,' 'The Advent and Appearance of New Stars,' 'The Asteroids," 'The Nebular Hypothesis,' 'The Secondary Planets,' 'The Plurality of Worlds,' 'Stellar Astronomy,' "Meteoric Astronomy,' 'The Remote Planets,' 'The Moon,' 'Earthquakes,' 'Volcanoes,' 'The Deluge,' 'The Sources of Power Accessible to Man,' 'The Distribution of Metals,' 'The Geography of Disease,' 'The Abuses of Science,' 'The Absence of Trees from Prairies,' 'Surface Geology,' 'The Primitive Earth,' 'The Ancient Atmosphere,' 'The Silurian Strata,' 'The Carboniferous Formations,' 'The Origin of Lakes,' 'Origin of Mountains,' 'The Cause of Rain, Winds, and Storms,' 'History and Nature and Uses of Electricity, its Agency in Nature,' 'Galvanism,' 'Magnetism,' 'Ocean Currents,' 'The Life of Newton,' 'Of Laplace,' 'The Physics of the Internal Earth,' 'Determination of Planetary Distances,' Geographical Advantages for National Ascendency,' 'Physics of the Internal Earth,' 'Discovery of Neptune,' 'Resolutions of Spectrum Analysis,' 'The Theory of Probabilities in the Detection of Crime,' 'The Catastrophies in Celestial Space.' These and many other discourses were the daily food of this singular and distinguished man. Is it any wonder that he who was so wrapt in the survey, scrutiny, and society of the upper and under worlds, should have neglected things of daily life at his feet; or that he should have prepared for history the anguish and mortification of contrasting the conditions of misery with that of those fashionable and superficial votaries of science who are proudly installed by public authorities in sinecures of several thousands a year, for which private beneficence and the citizens of all classes pay taxes, and labor under the mistake that they are getting an equivalent? If the lamentable tragedy which, in life as well as death, has been passing before our eyes without our comprehending it, shall move the minds of men and women, whether here assembled or elsewhere dispersed, to take a solemn resolution that any such repetition shall hereafter be made impossible, then it is to be hoped that Daniel Vaughn has not lived, struggled, and died a saint and a martyr in our midst, all in vain. But the heinous offense we have been guilty of in the sight of all men and before high heaven ought not to be condoned to this generation nor pass out of the memory of its successors.

"Prof. Daniel Vaughn was an Irishman, born near Cork, of wealthy parents, about the year 1821. He had a good education from a tutor, and also of the village school, where he was soon noted for great proficiency in mathematics. From a wild notion of liberty and discovery, or some domestic trouble, or both, he left home for the United States at the age of sixteen, landed at New York, and, seeking his destiny, came very directly west.

"He has been almost a constant resident of Cincinnati ever since, although for a short time he left and went to Lagrange, Ky., to teach in a private school where, however, he had no opportunities and small recompense. He came back, and thenceforth he may be said to have lived in the two great public libraries. He scanned all the scientific periodicals and other publications, and kept himself read up to the latest theories, discoveries, and speculations in Europe. He read the great Reviews of England and Scotland, and was very partial to the Paris *Revue des Deux Mondes*, in which some of his articles were favorably criticised.

Grimmer and darker, however, became the daily struggle for subsistence, but it seemed not to obscure the inner light, nor to make him despondent. It was one of the most painful city sights to meet the shadow of his former self, as Mr. Vaughn tottered past, inquiring, with his imperfect step, after the city news, and the health and prosperity of a few friends, to whom he was wont to resort more than before, because he felt the pressure of weakness and despondency. It was near the end, and we do not wish to dwell upon the mournful subject further than to say that his last hours were made comfortable by Sister Anthony, and that his departure was peaceful and painless. An autopsy revealed the wreck of his vital system, and proved that the long and dreadful process of freezing and starving had dried up the very sources of life. It was no longer desirable to live. We believe that excellent artist, Mr. Webber, has made a good portrait of Prof. Vaughn, and that will be a precious souvenir to his admirers. The funeral will be duly announced, and will no doubt be attended by the true *elite* of the city."

As Mr. Corry states, Prof. Vaughn was well versed in a number of languages, ancient and modern. He has translated both from French and German Journals for the MEDICAL NEWS; and as he has sat in our office we have known him to read from Tacitus and other Latin authors with the ease he would read from an English work.

DEATH OF DR. ISAAC HAYS.—We record in this number of the MEDICAL NEWS an unusual number of deaths of distinguished physicians.

Dr. Isaac Hays, who has edited the *American Journal of the Medical Sciences*, published by Henry C. Lea, of Philadelphia, for a period of *fifty-two years*, died April 13, in the eighty-third year of his age. He was born in Philadelphia of Hebrew descent, July 5, 1796, and graduated at the University of Pennsylvania in 1816. He received his medical degree at the same institution in 1820. In 1827 he became editor of the Philadelphia *Journal of the Medical and Physical Sciences*, the predecessor of the present quarterly. It has always ranked very high among periodicals of its class. Though his specialty was diseases of the eye, Dr. Hays showed a thorough appreciation of all branches of medical science. He retired from practice about fifteen years ago. He edited American editions of several foreign medical works, and was a member of various European and American societies. He never attended any place of worship.

DECEASE OF GEORGE B. WOOD, M. D., LL.D.—This most eminent American physician and author died in Philadelphia, March 30. We clip the following very brief synopsis in regard to him from an exchange: "Dr. Wood had been an invalid for a number of years, having been confined to his house for the last four years, almost two of which he passed in bed. He was born March 13, 1797, and was educated at the University of Pennsylvania, receiving the degree of A. B. in 1815. Commencing the study of medicine, he graduated from the medical department of the University in 1818. In 1822 he was made Professor of Chemistry in the Philadelphia College of Pharmacy, which position he filled until 1831, when he was made the Professor of Materia Medica, in the same school. In 1835 he was made Professor of Materia Medica in the medical department of the University of Pennsylvania, and in 1850 Professor of Theory and Practice of Medicine, being the successor to Prof. Chapman. This chair Prof. Wood retained until 1860, when he resigned and was made Emeritus Professor. He was also one of the physicians to the Pennsylvania Hospital from 1835 to 1859. Dr. Wood has contributed largely to medical literature, having written a number of valuable works, among the most noted being the United States Dispensatory, which was so popular as to reach its thirteenth edition. Also, a Treatise on the Practice of Medicine; Treatise on Therapeutics and Pharmacology; History of the Pennsylvania Hospital; History of Girard College, and a History of the University of Pennsylvania. At the time of his death Dr. Wood was the President of the College of Physicians, of which Society he has been a member since 1827. Dr. Wood was also a member of the Philadelphia County Medical Society, having been elected to membership in 1849.

THE PLAGUE.—There is no doubt that the medical profession in Russia are at the present moment in a state of profound unrest as to the near future of plague there. From the beginning of the outbreak in the province of Astrakhan, there has been a fear—determined perhaps by the course which the plague pursued during its recent prevalence in the province of Ghilan, Northwestern Persia—that this outbreak was probably but the forerunner of a wider and more serious manifestation in Russia which might be looked for in the course of spring. The cessation of the outbreak in the province of Astrakhan has not in any degree modified this view of the subject, and as the spring draws on, expectation is on the alert to distinguish the first indications of that which is dreaded. The occurrence of another and happily not fatal case of plague within the infected area on th Volga, in the course of last week, gave rise to a momentary fear that the period of intermission between the forerunning outbreak and the greater invasion apprehended had come to an end. It has not, however, the indication of this direction which exercises at the present moment the minds of our professional brethren in Russia. Their attention is fixed upon the seeming forerunners of the dreaded malady, which would appear to be scattered over the whole area of Russia in Europe. Our readers will remember the case of bubonic malady, unattended with much general disturbance of the system, which Professor Botkine observed a few weeks ago in St. Petersburg, and which he prononced to be the slight form of plague which often precedes the deadlier manifestations of the disease. The weight of medical opinion in St. Petersburg declared itself against Professor Botkine's view of this case. It is now known that the case in question is not the only one of the sort which has occurred in St. Petersburg, and that the later cases have been free from the complications which led to doubt in the earlier case. It is now known, too, that similar cases of this dubious bubonic affection have been observed also in Vitebsk, Tsaritsyn, Odessa, and in Warsaw; and it may be inferred that there is at present widely scattered in Russia a form of bubonic disease, of seemingly trivial character, unfamiliar to the medical profession there, and which it is feared may be of the sort which preceded the several recent appearances of plague in Mesopotamia, which occurred also prior to the late outbreak of plague in the province of Astrakhan, and which is, in fact, a form of plague.

Under these circumstances, it can be understood with what anxiety the near future as to plague is regarded in Russia by those who are most competent to judge of the possibilities of the case, and how anxiously obscure forms of disease are now being scanned over a large part of that empire. It is well that this state of things should be fully apprehended here. We shall not now have long to wait before the fate of Russia and our own prospect as to plague for the present year may be determined. But with the events of the Mesopotamian and Persian outbreaks before us, if Europe should be so fortunate as to escape from any further appearance of plague this year, it will be premature to think we have escaped with only the circumscribed explosion on the Volga until another winter and spring have passed.

THE MANATEE.—We find the following letter in the London *Times*, of March 27: "Sir—Will you allow me to supplement the interesting observations which have already appeared in your contemporaries on the above subject with the following facts, which appear hitherto to have escaped general notice. The sirens were formerly no strangers to the shores of Britain, for the near relative of the manatee, the nalitherium, occurs as a fossil in the red crag formation of Suffolk. It existed, however, at a time when there was no human being to record the living presence of what may, perhaps, be regarded as the archetypal "mermaid;" for the fossils, though found in the red crag of Suffolk, are yet generally considered by geologists as derived from much earlier beds of the miocene age, which once occupied a large area of what is now the German Ocean, whence they have been washed out and re-deposited on the coast of Suffolk. Similar remains are also found in the miocene of Belgium and Germany. The discovery of the British species formed the subject of a most interesting and instructive paper by Professor W. H. Flower, F. R. S., Hunterian Professor of the Royal College of Surgeons, and now President of the Zoological Society. It was published in the quarterly *Journal* of the Geological Society for February, in volume XXX., to which your readers are referred for further details by

NATURALIST STUDENT.

MARRIED.—We are happy to announce the marriage of DR. JOHN G. NUGENT to MISS AMELIA J. MACHUNE, by the Rev. E. Bell, all of Jerusalem, N. B., Canada. Dr. Nugent is a good physician, and we wish him and his wife a long and happy married life.

If we mistake not, we have mislaid marriage notices of other physicians sent us. Hope any who have been neglected will notify us again.

WE should have mentioned some time ago that Dr. O. W. Weeks is now at Marion, Ohio, where he should be addressed; also that Dr. J. Bunn is at Batavia, Ohio.

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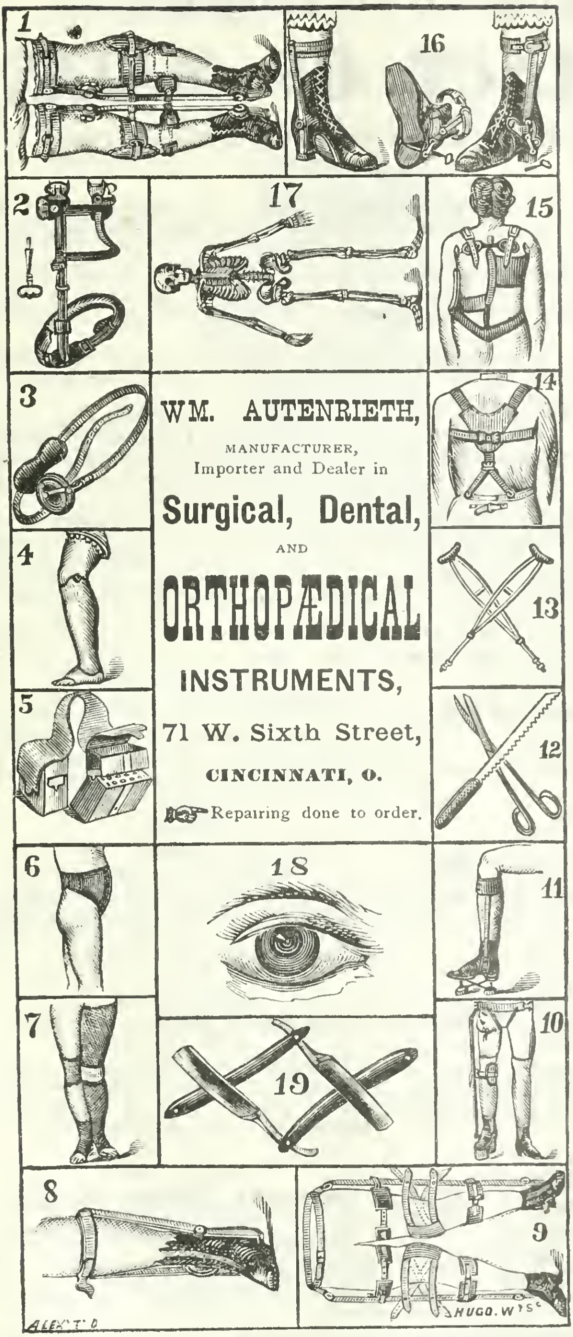

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THE IMPROVED TROMMER'S

EXTRACT OF MALT,

Prepared from the Best Canada Barley Malt by an Improved Process.

Attention is invited to the following Analysis of this Extract, as given by S. H. Louglas, Prof. of Chemistry, University of Michigan, Ann Arbor.

TROMMER EXTRACT OF MALT CO.:

I inclose herewith my analysis of your EXTRACT OF MALT: Malt Sugar (Glucose), 46.1; Dextrine, Hop-bitter, Extractive Matter, 23.6; Albuminous Matter (Diastase), 2.466; Ash (Phosphates), 1.712; Alkalies, .377; Water, 25.7. Total, 99.958.

In comparing the above analysis with that of the Extract of Malt of the German Pharmacopœia, as given by Hagar, that has been so generally received by the profession, I find it to substantially agree with that article.

Yours truly, SILAS H. DOWGLAS,
Professor of Analytical and Applied Chemistry.

This preparation is highly recommended by physicians as an effective agent for the restoration of delicate and exhausted constitutions. It is very nutritious, being rich in both muscle and fat producing materials.

By American and foreign authorities the MALT EXTRACT is extolled in the treatment of impaired, difficult and "irritable" digestion, loss of appetite, sick headache, chronic diarrhea, cough, bronchitis, asthma, consumption, the debility of females and of the aged, in retarded convalescence from exhausting diseases, and all depressing maladies. It is often borne by the stomach when every kind of food is rejected.

In addition to the Extract of Malt with Hops, the attention of physicians is invited to the following combinations:

IMPROVED

Trommer's Extract of Malt,

FERRATED.

Each dose contains four grains of the Pyrophosphate of Iron.

IMPROVED

Trommer's Extract of Malt,

WITH CITRATE OF IRON AND QUINIA.

Each dose contains four grains of the Citrate of Iron and Quinia.

IMPROVED

Trommer's Extract of Malt,

With Cod Liver Oil and Iodide of Iron.

Consisting of equal parts of Extract of Malt and Cod Liver Oil, Iodide of Iron being added in the proportion of one grain to the dose.

IMPROVED

Trommer's Extract of Malt,

WITH COD LIVER OIL.

Consisting of equal parts of Extract of Malt and the best Cod Liver Oil.

IMPROVED

Trommer's Extract of Malt,

With the Iodides of Iron and Manganese.

Each dose contains one grain each of the Iodides of Iron and Manganese.

IMPROVED

Trommer's Extract of Malt,

WITH HYPOPHOSPHITES.

Each dose contains 2 grains Hypophosphite of Lime; 2½ grains Hypophosphite of Soda, and 1 grain each of the Hypophosphites of Potassa and Iron.

IMPROVED

Trommer's Extract of Malt,

WITH ALTERATIVES.

Each dose contains the proper proportions of the Iodide of Calcium and Iron, and of the Chlorides and Bromides of Magnesium, Sodium and Potassium.

IMPROVED

Trommer's Extract of Malt,

WITH PEPSIN.

Each dose contains six and one-fourth grains of Pepsin and two and one-eighth minims of Hydrochloric Acid.

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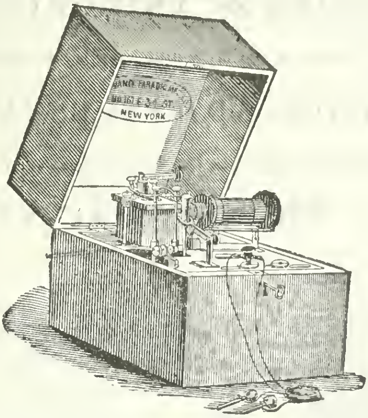

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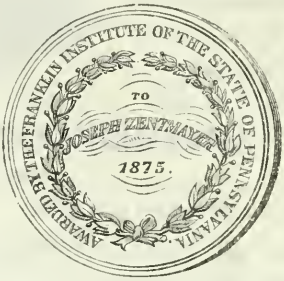
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Sept-1y

TO THE MEDICAL PROFESSION

MALTINE.

(EXTRACT OF MALTED BARLEY, WHEAT & OATS.)

THIS PREPARATION
Contains from three to five times the Medicinal and Nutritive Elements found in Extract of Malt.

MALTINE is a highly concentrated extract of malted Barley, Wheat and Oats, containing, undiminished and unimpaired, all the medicinal and nutritious principles found in these cereals. By the most carefully conducted scientific process, we are enabled to offer to the medical profession a perfect article, possessing from three to five times the therapeutic and nutritive merit of any foreign or domestic Extract of Malt.

In support of our claims we invite the attention of the profession to the following points, viz:

FIRST: In the manufacture of MALTINE the evaporation necessary to reduce it to its great density is conducted in vacuo, at a temperature ranging from 100° to 120° Fahr.; while most manufacturers of Extract of Malt resort to "open pan" or low pressure steam boiling, by neither of which processes can the extract be so produced as to preserve the Diastase, Phosphates, and Albuminoids on which its remedial value so greatly depends, and the product is either of a dark color or of low specific gravity, possessing little virtue aside from the saccharine matter which it contains.*

SECOND: Carbon, Hydrogen, Nitrogen, Phosphorus, Sulphur, Iron, Magnesium and Potassium are essential elements in the food of man, and it is only in MALTINE, containing the combined properties of malted Barley, Wheat, and Oats, that all these principles can be found in the proper proportions; Extract of Malt made from Barley alone is wanting in some of the most important of these elements.

THIRD: Gluten is the most nutritious principle found in the cereals, and is the only vegetable substance which will alone support life for any great length of time. It is composed of three distinct nitrogenous principles, together with fatty and inorganic matters, and is analogous to animal fibrin. MALTINE contains twenty times the quantity of Gluten found in any Extract of Malt.

FOURTH: Liebig says, "Wheat and Oats stand first among our list of cereals in combining all the elements in proportions necessary to support animal life. They are especially rich in muscular and fat producing elements." The only reason we use malted Barley in the manufacture of MALTINE is that it contains larger productions of mineral matters (bone producers) and Diastase. It is deficient in all other essential elements.

We believe that any practitioner will readily recognize the superiority of MALTINE, and would request a trial and comparison of merits with any article offered for similar uses.

---

* As a sure test for Diastase, and the Albuminoids, a small quantity should be put in a test tube or small vial, largely diluted with water, and heated to the boiling point, when the Albumen, if present, will coagulate, and appear in little flocculent particles throughout the liquid. If the extract remains clear, it is proof that it has already been coagulated by excessive heat, and removed by filtration during the process of manufacturing. Any heat which will coagulate Albumen will inevitably destroy the digestive power of Diastase..

(OVER.)

The Nitrogenous constituents of MALTINE have a composition identical with that of the chief constituents of the Blood, and therefore contain nearly every element requisite for the reproduction of the human body.

MALTINE AND ITS COMPOUNDS

Can undoubtedly be used with greater success than any other remedy now known, in cases of general and nervous Debility, Indigestion, imperfect Nutrition and deficient Lactation; Pulmonary affections, such as Phthisis, Coughs, Colds, Hoarseness, Irritation of the Mucous Membranes and difficult expectoration; Cholera Infantum and wasting diseases of children and adults; Convalescence from Fevers, and whenever it is necessary to increase the vital forces and build up the system.

We manufacture the following preparations, the formulas and doses of which are given in our dose books and on the label attached to each bottle:

MALTINE with Hops.

MALTINE, Ferrated:
This combination is specially indicated in Anæmia and Chlorosis, and in all cases of defective nutrition, where Iron is deficient in the system.

MALTINE with Phosphates Iron and Quinia:
A powerful general and nutritive tonic.

MALTINE with Phosphates Iron, Quinia and Strychnia:
A powerful nutritive, general and nervous tonic.

MALTINE with Hypophosphites:
This preparation is specially indicated in Phthisis, Rickets, and deficient Ossification.

MALTINE with Pepsin and Pancreatine:
One of the most efficient combinations in Dyspepsia, Cholera Infantum and all diseases resulting from imperfect nutrition. It contains three of the all-important digestive agents, Diastase being one of the constituents of the MALTINE. We believe there are few cases of Dyspepsia which will not readily yield to the medicinal properties of the above combination, while the system is invigorated by its nutritive qualities.

MALTINE with Beef and Iron:
One of the most valuable combinations in cases of general Debility, when there is deficient nutrition and a deficiency of Iron in the system.

MALTINE with Cod Liver Oil:
The most perfect emulsion, and most agreeable and effective mode of administering this nauseous but valuable Oil yet discovered.

MALTINE with Cod Liver Oil and Phosphorus:
In this combination the Phosphorus has no irritant effect upon the stomach.

MALTINE with Cod Liver Oil and Iodide of Iron:
This is prepared with the tasteless Iodide of Iron, which undergoes no chemical change from contact with the Oil, and does not blacken the teeth.

MALTINE with Alteratives:
In this preparation MALTINE is combined with the most valuable Alteratives known, such as Iodides, Bromides, and Chlorides, and will fully meet the requirements of the practitioners in Syphilis, Scrofula, and all depraved conditions of the blood. Each fluid ounce contains: Chloride Calcium, 10 grains; Chloride Magnesium, 10 grains; Bromide Sodium, 5 grains; Iodide Potassium, 1 grain; Iodide Iron, ¼ grain. Dose: One teaspoonful to one tablespoonful.

We also manufacture a perfectly prepared Extract of Malt from Barley only.

MALTINE preparations are sold at the same prices as Extract of Malt and its combinations, and are put up in amber bottles holding sixteen fluid ounces; each bottle inclosed in a folding paper box.

REED & CARNRICK, *Manufacturing Pharmacists,*
196 & 198 FULTON ST., NEW YORK.

SCOTT'S EMULSION

PURE COD LIVER OIL

WITH

HYPOPHOSPHITES OF LIME AND SODA

PERFECT, PERMANENT, PALATABLE.

We respectfully ask the Medical Profession to give the above preparation a trial, knowing they will find it just the thing long desired, and obtain splendid results in the wasting diseases indicated by mal-nutrition and assimilation. The *perfect* and *permanent* union of the Cod Liver Oil with the Hypophosphites, and the thorough manner in which the nauseous taste is disguised, renders it so palatable that the most delicate stomach can retain it. The notable advantage it possesses over all other preparations, is its permanency as an emulsion, remaining for an almost unlimited time without the slightest separation or change, which enables the Physician always to prescribe it in its proper proportions. This oil is prepared expressly for us and guaranteed strictly pure. We will gladly furnish, express paid, a 4 oz. sample to any Physician in the country who may not have been supplied.

FORMULA.—50 per cent. of pure Cod Liver Oil, 6 grs. of the Hypophosphite of Lime, and 3 grs. of the Hypophosphite of Soda to a fluid ounce.

MESSRS. SCOTT & BOWNE:

Gentlemen:—I have used the Emulsified Cod Liver Oil and Hypophosphites prepared by you, and have been much gratified with its results.

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For the last fifteen months I have used your Cod Liver Oil Emulsion, both in hospital and in private practice, and have been greatly pleased with its effects. It is better borne, and can be taken for a longer time, than any other preparation of Cod Liver Oil. In Children's Diseases I have found it especially valuable.

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As it is not possible, within prescribed limits, to particularize in reference to each Objective, we may refer to some of the powers of each Series as representatives, approximatively, of the qualities belonging thereto.

All of the 4-system Objectives of the First-class Series, from, and including the ¼ inch, upward, will, when used as immersion, resolve the *Balsam-mounted* Amphipleura Pellucida. the nineteenth band of Nobert, and every other known test-object, with good daylight and concave mirror. Their immersion angle is equivalent to above 180° in air.

Of the Professional Series, the ½ inch of 65° will resolve P. Angulatum (Moeller's) into dots by oblique light with concave mirror; the ¼ inch, of same Series. will resolve the same test easily by mirror with central light; the N Rhomboides (larger frustules, dry mounted) of Bemis Lake into dots by oblique mirror-illumination; the 1-6 of 140°, D and I same Series will resolve Surirella Gemma *into dots;* the ⅛ of 160°, D and I, will resolve Amphipleura Pell. (dry mount) by concave mirror and white-cloud illumination; and the 1-18 will resolve the same test and has unusually great working distance.

Of the Student's Series, the ¼ inch of 100° will resolve P. Angulatum by central light with mirror; and the ⅛ of 112° will resolve the finer lines of Surirella Gemma. The ⅔ of this Series is remarkable for perfect flatness of field and excellent definition .

FIRST-CLASS OBJECTIVES.

3	inch Focal Length,	12°	Angular Aperture	$15 00
2	" " "	20°	" "	25 00
1	" " "	50°	" " Will show 40,000 lines to the inch	40 00
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1-6	" " "	....		65 00
1-8	" " "	....		70 00
1-10	" " "	....		70 00
1-16	" " "	....		100 00
1-25	" " "	....		150 00
1-50	" Immersion "	175°		200 00
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Graduated collar adjustment from ½ inch inclusive upward, giving rectilinear movement to the inner systems.

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2 inch	15°	15	
1 inch	30°	15	
2-3 inch	35°	18	
1-2 inch	65°	20	
1-4 inch	115°	20	Adjustable.
1-6 inch, D and 1	140°	25	”
1-8 inch, D and I	160°	40	”
1-15 inch, Im	160°	45	”
1-18 inch, D and I	160°	55	”

STUDENT'S SERIES.

FOCAL LENGTH.	ANG.	PRICE.
3 inch	8°	$ 6
2 inch	10°	6
1 inch	20°	8
2-3 inch	30°	10
1-2 inch	45°	10
1-4 inch	100°	14
1-8 inch	112°	20
1-16 inch	120°	30

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Purest Evaporation of the Mineral Water of these Celebrated Springs.

This Mass is the combined medicinal substances of this wonderful Water, condensed in the most convenient form for use and transportation. It is put up in bottles, which are sent anywhere, postpaid, for 50 cents or $1, or $2 50 or $5 for half dozen. Each $1 bottle contains the curative virtue of five gallons of water. This Mass has an established reputation of twenty-six years, and its efficiency is attested by the actual results in thousands of cases.

The medical properties of this standard natural remedy are Tonic, Alterative, Astringent, Aperient, Solvent, Diuretic, and Anti-periodic.

CHIEF CONSTITUENTS.—Aluminum, Iron, Magnesium, Calcium, Sodium, Potassium, Lithia, Ammonium.

Directions and analysis accompany each package.

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"Safe, reliable and efficient for throat diseases"—*Dr. Geo. W. Carrington, Va.*

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"Unequaled in regulating the secretive organs."—*P. H. Christian, M. D., Va.*

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"Excellent tonic, alterative and diuretic."—*Medical Association of Lynchburg, Va.*

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This Mass has been lately found efficient in the prevention and cure of yellow fever.

BELLEVUE HOSPITAL MEDICAL COLLEGE

CITY OF NEW YORK,

MEMBERS OF THE AMERICAN MEDICAL COLLEGE ASSOCIATION.

SESSIONS OF 1878-'79.

THE COLLEGIATE YEAR in this Institution embraces a Preliminary Autumnal Term, the Regular Winter Session, and a Spring Session.

THE PRELIMINARY AUTUMNAL TERM for 1878-'79 will open on Wednesday, September 18, 1878, and continue until the opening of the Regular Session. During this term instruction, consisting of didactic lectures upon special subjects, and daily clinical lectures, will be given, as heretofore, by the entire Faculty. Students expecting to attend the Regular Session are strongly recommended to attend the Preliminary Term, but attendance during the latter is not required. *During the Preliminary Term clinical and didactic lectures will be given in precisely the same number and order as in the Regular Session.*

THE REGULAR SESSION will begin on Wednesday, October 2, 1878, and end about the first of March, 1879.

FACULTY.

ISAAC E. TAYLOR, M. D.,
Emeritus Professor of Obstetrics and Diseases of Women, and President of the Faculty.

JAMES R. WOOD, M. D., LL. D.,
Emeritus Professor of Surgery.

FORDYCE BARKER, M. D.,
Professor of Clinical Midwifery and Diseases of Women.

AUSTIN FLINT, M. D.,
Professor of the Principles and Practice of Medicine and Clinical Medicine.

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Professor of Principles and Practice of Surgery, Diseases of Genito-Urinary System and Clinical Surgery.

LEWIS A. SAYRE, M. D.,
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WILLIAM T. LUSK, M. D.,
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WM. M. POLK, M. D.,
Professor of Materia Medica and Therapeutics and Clinical Medicine.

AUSTIN FLINT, JR., M. D.,
Professor of Physiology and Physiological Anatomy, and Secretary of the Faculty.

JOSEPH D. BRYANT, M. D.,
Professor of General, Descriptive and Surgical Anatomy.

R. OGDEN DOREMUS, M. D., LL.D.,
Professor of Chemistry and Toxicology.

EDWARD G. JANEWAY, M. D.,
Professor of Pathological Anatomy and Histology, Diseases of the Nervous System, and Clinical Medicine.

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JOHN P. GRAY, M. D., LL.D.,
Professor of Physiological Medicine and Medical Jurisprudence.

ERSKINE MASON, M. D.,
Clinical Professor of Surgery.

EDWIN L. KEYES, M. D.,
Professor of Dermatology, and Adjunct to the Chair of Principles of Surgery.

J. LEWIS SMITH, M. D.,
Clinical Professor of Diseases of Children.

LEROY MILTON YALE, M. D.,
Lecturer Adjunct upon Orthopœdic Surgery.

A distinctive feature of the method of instruction in this College is the union of clinical and didactic teaching. All the lectures are given within the Hospital grounds. During the regular Winter Session, in addition to four didactic lectures on every week-day, except Saturday, two or three hours are daily allotted to clinical instruction.

The Spring Session consists chiefly of recitations from text-books. This term continues from the first of March to the first of June. During this session daily recitations in all the departments are held by a corps of examiners appointed by the Faculty. Regular clinics are also given in the Hospital and in the College building.

FEES FOR THE REGULAR SESSION.

Fees for Tickets to all the Lectures during the Preliminary and Regular Term, including Clinical Lectures	$140 00
Matriculation Fee	5 00
Demonstrator's Ticket (including material for dissection)	10 00
Graduation Fee	30 00

FEES FOR THE SPRING SESSION.

Matriculation (Ticket good for the following winter)	$ 5 00
Recitations, Clinics, and Lectures	35 00
Dissection (Ticket for the following winter)	10 00

Students who have attended two full Winter Courses of Lectures may be examined at the end of their second course upon Materia Medica, Physiology, Anatomy, and Chemistry, and, if successful, they will be examined at the end of their third course upon Practice of Medicine, Surgery, and Obstetrics only.

For the Annual Circular and Catalogue, giving regulations for graduation and other information, address
Prof. AUSTIN FLINT, Jr., Secretary, Bellevue Hospital Medical College.

Mar.78-1y

Dr. JEROME KIDDER'S
ELECTRICAL DEPOT,

The discrimination in the Centennial awards, as is well known, existed in THE WRITTEN REPORTS ON AWARDS by the judges, and not in the medals, which were all alike. Dr. Kidder, as far as he knows, is the only one who has published any authorized report upon such apparatus The Centennial award is as follows:

International Exhibition,

PHILADELPHIA, 1876.

The United States Centennial Commission has examined the report of the Judges, and accepted the following reasons, and decreed an award in conformity therewith.

PHILADELPHIA, *Feb.* 24, 1877.

REPORT ON AWARDS.

"PRODUCT,
GALVANIC APPARATUS.

Name and Address of Exhibitor,
JEROME KIDDER, M. D., New York.

The undersigned, having examined the product herein described, respectfully recommend the same to the United States Centennial Commission for award, for the following reasons: For the **Scientific basis** and the excellent workmanship of all the exhibited Apparatus; for the introduction of a new method to get very rare interruptions from a self-acting interrupter; for the fitness for the purposes of **changing the quality and quantity** of the galvanic current, and for the very good construction of Galvano-Caustic Apparatus.

Dr. ERNST FLEISCHL, *Signature of the Judge.*

Approval of the Group of Judges.

W. ROTH, M. D., *Surg.-Gen., Saxony, German Army.*
J. H. THOMPSON, A. M., M. D.
C. B. WHITE, M. D.

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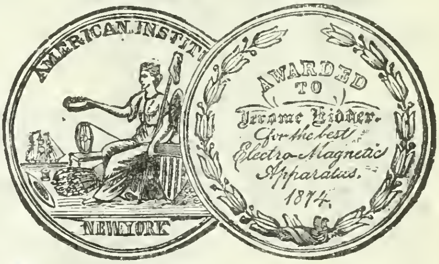

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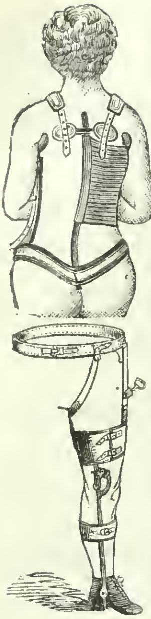

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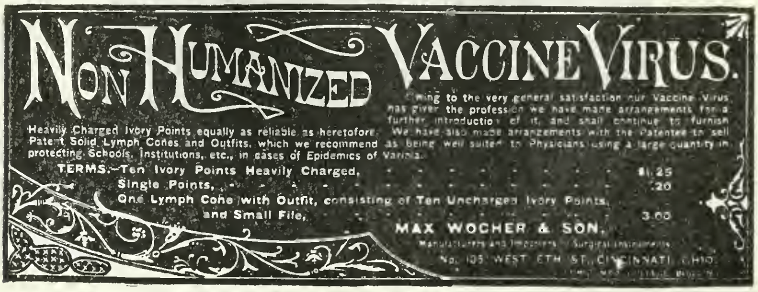

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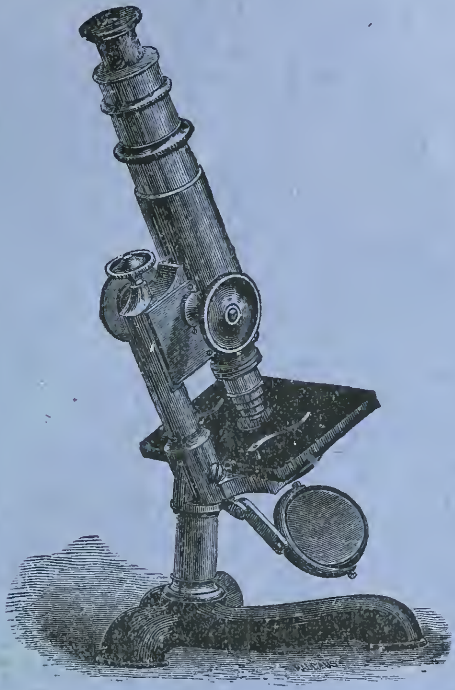

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